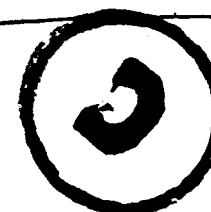


1125

IND - COM JOURNAL



3

Vol. XX1

July - Sep 1966

No. 3

JL
X8m, N45
N66. 21.3
93776.



**DIRECTORATE OF
INDUSTRIES
AND
COMMERCE**

Ind-com Journal



NOW AVAILABLE

DIRECTORY OF LARGE SCALE INDUSTRIAL
UNDERTAKINGS IN MADRAS STATE

Price Rs. 5 By Post Rs. 7

DIRECTORY OF SMALL SCALE INDUSTRIAL UNITS
IN MADRAS STATE

Price Rs. 10 By Post Rs. 16

MINERALS OF MADRAS

Price Rs. 12 By Post Rs. 15

INDUSTRIAL PROGRAMMES FOR THE
FOURTH PLAN—MADRAS STATE

Price Rs. 20 By Post Rs. 22

SMALL SCALE INDUSTRIES
EXISTING AND PROSPECTIVE

Price Re. 1 By Post Re. 1.25

PAMPHLET ON CASHEWNUT SHELL OIL

Price Re. 0.50 By Post Re. 0.75

No V. P. P.



Please remit in advance by M.O. in favour of

MANAGER-CUM-EDITOR,

Technical Information Section,

Industrial Estate : : MADRAS - 32.

Copies can also be had from the office of the

TECHNICAL INFORMATION SECTION,

AT THE

Industrial Estate, MADRAS - 32.

IND COM JOURNAL

ESTD-6.

Vol. XXI

JULY - SEPTEMBER 1966

No 3

IN THIS ISSUE

	PAGES
INDIA'S FIRST SMALL CEMENT PLANT SET UP IN MADRAS STATE	1—2
ARTIFICIAL LIMB CENTRE	3—5
AGRO-INDUSTRIES	7—9
NEW SCHEMES—i. A Functional Estate for Electrical Industries. ii. Service Centre for Electro-Medical Equipments. iii. Handicrafts—Schemes Sanctioned for Implementation in the Fourth Plan Period	1—15
IMPORT SUBSTITUTION—Graphite crucibles; Forsterite refractory; Anthracite coke; 'Reclamation' of used lubricants; CSIO develops new instruments; Aluminium-based alloys	17—19
SCIENCE NEWSLETTER—Growth of India's glass and glassware industry; New research in comfort properties of leather goods; White printing papers from rice straw; New ways of disposal of radio-active waste; New rot-proofing agent for textiles; Indigenous coolant for cars devised; Techniques in food preservation; Mechanical rice transplanter; Yarn appearance examining machine; Process to change pepper colour	21—28
NEWS AND NOTES—Development of mineral resources in Madras State; British hydrogeologist to work in India; New companies formed	29—32
INVENTIONS ABROAD—Catching fish with electric nets; Diamonds from the high-pressure press; Electrical pressure transducer; Irradiation may become a major technique for food preservation	33—36
CO-OPERATIVES—Industrial co-operatives and the small scale handicrafts and cottage industries in the Madras State	37—40
STANDARDS—Revised Indian Standard for aluminium casting; ISI convention at Ernakulam.	41—42
BRICKS CONTROL ORDER—Building brick declared an essential article	43—52
LICENCES—List of licences issued under the Industries (Development and Regulation) Act, 1951	55—63

fired in vertical kilns. As the kiln performs also the work of cooling, a separate cooler is not required. Since the first kiln was built by Joseph Espdin a little more than hundred years ago, many improvements and changes have been made in the shaft kilns from a rotary type to a vertical one for better performance and economic operation.

ADVANTAGES OF SMALL PLANT

The advantages of a small cement plant adopting shaft kiln process are less capital investment and lower cost of installation. The time needed to erect a plant is also reduced to an appreciable extent. Another advantage

is that in areas where either the demand is restricted or raw material (mainly limestone) availability is limited, a small shaft kiln plant would be the obvious choice. Establishment of small units will not only help in the dispersal of industries, but also result in full utilisation of small deposits of the main raw materials spread over the country. Finally, in India, where the transport facilities are short of the demand and where the need to conserve foreign exchange is likely to persist for some more years to come, the small cement plants appear to offer immense possibilities of quick development.

Gram: **FLATFILES** *Phone* { 25187
29521

P. B. SHAH & CO. (Madras)
21, Linghi Chetty Street MADRAS-1

Leading Stockists and Specialists in:
ENGINEERING AND PRECISION TOOLS, HARDWARE AND MACHINERIES

Accredited dealers for:

SAP Hack saw blades and tools ADDISON Tools I/T Drill bits etc. WOLF Electric tools KLIPCO Hose clips	SHIVAJI Vices etc. GECO Revolving centres Etc. HANSA Files GEDORE Tools RAJU Chain pulley blocks
---	--

R. R. BRAND LETTERS & FIGURES

Associates at: **CALCUTTA AND BOMBAY**

ARTIFICIAL LIMB CENTRE

DEPARTMENT OF ORTHOPAEDIC SURGERY

GOVERNMENT GENERAL HOSPITAL, MADRAS.

By
Dr. NATARAJAN, B.A. M.B., M.Ch., Orth. FRCS. (Eng).
 Director, Artificial Limb Centre
 &
A. BALAKRISHNAN B. E.,
 Superintendent, Artificial Limb Centre.

Until very recently persons in South India who lost their limbs had to go all the way to Poona to get themselves fitted up with artificial limbs. In those days, the only Artificial Limb Centre to serve the patients in the whole of India, was the Army Centre at Poona. After registration, the civilian patients had to wait months on end to be called in at the centre for fitting up of limbs and for physical rehabilitation training. For an amputee from South India, this meant enormous expenditure of money, time and energy. The poorer amputees invariably could not fulfil their dreams of an artificial limb.

Hence it was in the fitness of things that a scheme for an Artificial limb and orthopaedic splint making centre attached to the Orthopaedic Department of the Government General Hospital, Madras, was envisaged during the Third Five Year Plan by the Government of Madras. The preliminary works connected with the starting of the centre were completed in 1963 and the centre started functioning from April, 1964. Since then the centre has grown from strength to strength and so far 1,081 cases have been treated and discharged out of which 117 cases were fitted up with artificial limbs and 964 cases were fitted up with Orthopaedic appliances.

A clinic team functions at the centre headed by the Orthopaedic Surgeon and Director of the centre assisted by a Medical Officer, an Engineer, Physiotherapists, Prothetists and Social Workers. The limbs and appliances are made conforming to the prescription of the Orthopaedic Surgeon.

The centre consists of a workshop wing and a rehabilitation wing. The Engineer in-charge of the workshop and other supervisory staff under him have been deputed by the Department of Industries, Government of Madras. The supervisors and a few skilled workers had training in the Artificial Limb Centre at Poona and also at the All India Institute of Physical Medicine and Rehabilita-

tion, Bombay. The Production Assistant of the workshop had four months training at Vellore under one of the Experts of the World Rehabilitation Fund, United States of America. The workshop is equipped with machinery worth about Rs. One lakh.

The Medical Officer as well as the Senior Physiotherapist had training in Poona and Bombay. The fitting and rehabilitation sections are well equipped with the latest equipments and other aids in the rehabilitation of patients fitted with limbs and appliances.

A noteworthy feature of the centre is that instead of going in for new and expensive buildings all available space in the existing buildings of the Government General Hospital, Madras have been utilised thereby reducing the expenditure to the minimum. The workshop, in fact, is under the Stanley Viaduct. Yet another feature is that the limbs and appliances are made with indigenous materials but adopting the latest trends in production techniques. Apart from leather, wood, rubber and metal sections, a plastic section has also been added to the centre.

One of the most important aspects of prothetic development is research both fundamental and applied. Fundamental research regarding the biomechanics of the paralysed and amputated limbs needs the combined work of the Department of Orthopaedics of the Medical Faculty and Faculty of Engineering. The other field is that of applied research regarding the use of local and indigenous materials in the fabrication of limbs and splints and other Orthopaedic appliances. Hence there is a proposal to add a research wing to the centre. As a pilot scheme a research and demonstration project with aid from the Vocational Rehabilitation Administration, U. S. A. has been started recently.

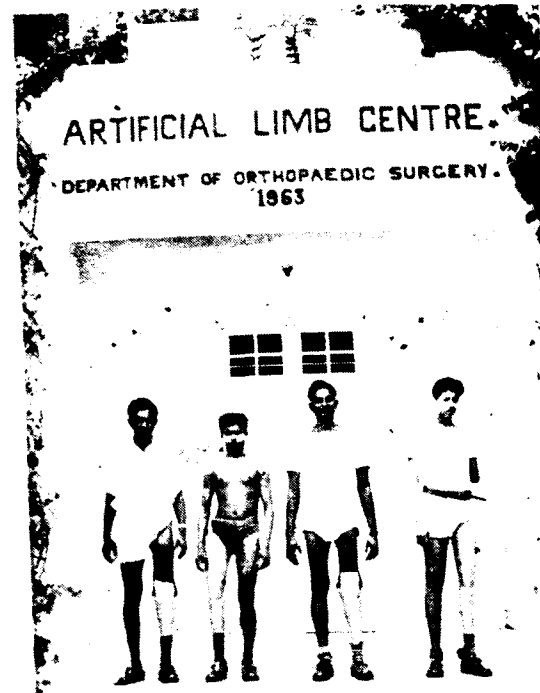
There is a proposal to start a Central Prosthetic unit at Madras for the mass production of component parts of artificial limbs and other orthopaedic appliances. The Department of Industries, Madras will run the unit with aid from Government of India. The unit will meet the demand of component parts on an All India basis. Help from the Vocational Rehabilitation Administration, U. S. A., is also expected for the project.

Patients from all over the state and other states all over India are now being treated at the Madras Centre. For the convenience of patients in other parts of the state, it is proposed to open sub centres at Madurai, Thanjavur and Coimbatore. The Madurai Centre is expected to start functioning soon. During the fourth plan period, it is proposed to shift the Madras Centre from the Government General Hospital premises to a new site in Adyar where it is proposed to develop an Institution of Rehabilitation in the Campus of the Post-Graduate Medical Centre.

Certain facilities and concessions are granted to the patients attending the centre. The full cost of the limb or appliance is recovered from patients only when their income exceed Rs. 500. For persons with income of less than Rs. 100 a flat rate of Rs. 25 for limb and Rs. 10 for appliances only is charged. For persons getting between Rs. 100 to Rs. 300, 25% of the cost is charged. Again for the income group from Rs. 300 to 500, 50% of the cost is charged. An orthopaedically handicapped person is permitted to take with him an attendant free of charge for rail travels when the travel is made to attend the centre or while returning after treatment. A van has been purchased by the Orthopaedic Department for the transport of the patients from their places to the centre and back. This has been done with assistance from the Vocational Rehabilitation Administration, U. S. A.



The Director, Artificial Limb Centre reviews cases with the clinic team



Entrance to the Centre—Amputees on the threshold of a new life



A Policeman Amputee—Can he hope to be a Policeman again



Yes. Thanks to the Artificial Limb Centre, he is back to work with an artificial limb

Apart from the help rendered by the Government, there is scope for aid from private persons, organisations and Industries. There are many poor patients who cannot afford to pay even the flat rate of Rs. 25 for limbs and Rs. 10 for appliances. It will be a fine and kind gesture if private persons and organisations come forward to meet the cost of the limb and appliances in deserving cases. Again patients from mofussil places find it difficult to get accommodation in the city and even if they get, they have to incur heavy expenditure. Normally an amputee may have to stay in the city for atleast 6 weeks for

treatment and discharge. In case any organisation comes forward to provide accommodation to deserving patients during their stay in Madras, it will definitely help to reduce the hardship and inconvenience now being undergone by many of the patients.

It would not be out of place to make a special appeal to the Industrialists of Madras also. They can participate in the programme of manufacture of the limbs and appliance needed by these patients by giving their valuable suggestions for improved production technique, import substitution and other matters.

FOR YOUR REQUIREMENTS

Phone : 23113

Contact :

LINGAM & CO.,

CIVIL AND SANITARY ENGINEERS AND CONTRACTORS
DEALERS IN SANITARY MATERIALS AND



Stockists of :

"EVEREST" A. C. ROOFING & PLAIN SHEETS, PIPES & FITTINGS
304, THAMBU CHETTY STREET, MADRAS - I.

JULY—SEPTEMBER 1966

UNIQUE Opportunity For Small Industries

For Service on
Special Purpose
Machine Tools at
Moderate Charges

EXTERNAL GRINDERS, MILLING MACHINES,
TURRET LATHES, H. M. T. CENTRE LATHE,
SLOTING MACHINE, HEAVY DUTY
VERTICAL SURFACE GRINDER, HEAVY
DUTY PLANE MILLING MACHINE

Please Contact :

THE SUPERINTENDENT,

COMMON LEASE SHOP

INDUSTRIAL ESTATE,

GUINDY, MADRAS-32.



AGRO-INDUSTRIES

To draw up an exhaustive list of agro-industries, a group consisting of representatives of the Planning Commission and the Central Small Industries Organisation was appointed during the recent Seminar on Industrialisation of Sub-metropolitan area. The Group synthesised the thinking on the subject in the Planning Commission, Ministry of Food and Agriculture and the Ministry of Industry. Agro-Industries should basically include all industries connected with the processing of agricultural produce and agricultural wastes. They should include not only canning and processing of fruits and other agricultural produce but also provision of cold storage facilities and processing of various agricultural fibres and forest products which now go waste. Similarly some marine products based industries could also be included

under the category. On the inputs side, the manufacture of agricultural implements including tillers and agricultural sprayers have to be considered as agro-industries while the question whether production of items like tractors, fertilisers, etc. should be included under this category needs further detailed consideration.

Against this background, the group prepared a tentative list of agro-industries. The list was considered and approved by the Ministry of Industry. It may, however, be emphasised that the list is only illustrative: it is not exhaustive but brings together for the first time various industries which could be categorised as agro-industries. It, thus, serves as basis for further work. Almost all the industries listed are capable of being undertaken in the Small Scale Sector.

LIST OF AGRO-INDUSTRIES

I. AGRICULTURAL PROCESSING AND ALLIED INDUSTRIES

A. Food products :—

- | | |
|---|---|
| 1. Cereals and pulses processing. | 10. Yeast. |
| 2. Fruits, vegetables preservation and processing, canning etc. | 11. Poultry feed. |
| 3. Bakery products and confectionery. | 12. Carbonated drinks. |
| 4. Dairy products. | 13. Spaghetti. |
| 5. Gur, Khandsari and sugar. | 14. Poultry. |
| 6. Tobacco processing. | 15. Egg powder. |
| 7. Vegetable oils. | 16. Meat and piggery products. |
| 8. Ragimalt. | 17. Fish canning and preservation. |
| 9. Balanced cattle feed. | 18. Flavouring scents and edible colours. |
| | 19. Pectin and papain. |
| | 20. Scented arecanut powder. |

21. Jelly and icecream powder.
22. Bee keeping.
23. Processed frog legs (for export).
24. Shark liver and other fish oils.
25. Canning of shrimps, crabs, oysters.
26. Katha.
27. Epsom salt.
28. Ayurvedic preparations.

B. Non-Food and allied products :—

(i) Textiles and Fibres industries :

1. Cotton ginning and pressing.
2. Cotton spinning and weaving.
3. Silk reeling, spinning and weaving.
4. Jute baling, pressing, spinning and weaving.
5. Coir spinning and weaving.
6. Cardage ropes, twine, etc.
7. Cane, rattan and other fibres.
8. Fibres from banana stalk and pineapple leaves, etc.
9. Surgical cotton.
10. Hosiery.
11. Ready-made garments.

(ii) Wood and Timber products :—

1. Saw milling and wood work.
2. Timber seasoning.
3. Furniture and radio cabinets.
4. Joinery products.
5. Building fittings.

6. Tea chests and other packing cases.
7. Country crafts and hulls for mechanised fishing.
8. Handloom accessories.
9. Candles of tools and implements.
10. Match splints and veneers
11. Wooden toys.
12. Chips, particles and saw dust boards.
13. Ammunition boxes.
14. Umbrella handles and sticks.
15. Ironing boards.
16. Shoe lasts.
17. Wooden stationery articles.
18. Cable drums.
19. Coat hangers.
20. Other wooden articles.

(iii) Others

1. Bricks and tiles.
2. Pottery.
3. Lime industry.
4. Stonedressing and crushing.
5. Bonemeal and other bye-products.
6. Tanning and leather products.
7. Chalks.
8. Table lamps and decorative pieces, from sippies and shanks.
9. Cinnamon and lemon grass oil.
10. Double boiled linseed oil.

- xii. Green manure trampler.
- xiii. Wet land puddler.
- xiv. Paddy weeder.
- xv. Disc. harrows.
- xvi. Cultivators.
- xvii. Spring Tooth harrows.
- xviii. Seed/Fertilizer Drills.
- xix. Chaff cutters.
- xx. Sugar cane crushers.
- xxi. Olpod Thrashers.
- xxii. Power Thrashers.
- xxiii. Bund formers.
- xxiv. Reapers.
- xxv. Paddy thrashers (Pedal).
- xxvi. Cutway disc harrows.
- xxvii. Paddy hullers.
- xxviii. Rice polishers.
- xxix. Seed graders.
- xxx. Winnowers.
- xxxi. Power paddy thrashers.
- xxxii. Others.

5. Poultry farming equipment.

- i. Incubators.
- ii. Sterilizers.
- iii. Chick sexing machine.
- iv. Feeders (chick feeders, grower, feeders, Adult Flock Feeders)
- v. Automatic chain feeders.
- vi. Community nests.
- vii. Bird crates.
- viii. Egg collecting wire baskets.
- ix. Electric collecting beekers.
- x. Poultry weighing scales.
- xi. Catching and handling rods.
- xii. Chick baskets.
- xiii. Pedigree cages.
- xiv. Electric and mechanical egg graders.
- xv. Electrical and mechanical egg washers.
- xvi. Egg Cartons (Card board)
- xvii. Egg cases (wooden and card board).

- xviii. Egg room coolers.
- xix. Feed mixers.
- xx. Feed grinders.

6. Slaughter house equipment.

- i. Tables.
- ii. Tanks.
- iii. Hooks.
- iv. Overalls.
- v. Rubber boots.
- vi. Knives.

7. Dairying.

- i. Milk pails.
- ii. Milk cans.
- iii. Hand trolley.
- iv. Bottle crates.
- v. Bicycles.

8. Fisheries.

- i. Paper cartons for packing.
- ii. Plastic bags for packing

9. Forestry.

10. Cowdung gas plants.

B. Pesticides :—

- i. B. H. C. Formulations.
- ii. D. D. T. Formulations.
- iii. Parathion Formulations.
- iv. Malathion Formulations.
- v. Lindane Formulations.
- vi. Chlordane Formulations.
- vii. Endrin Formulations.
- viii. Dieldrin Formulations.
- ix. Aldrin Formulations.
- x. Copper oxychloride Formulations.
- xi. Toxaphene Formulations.
- xii. Zineb Formulations.
- xiii. Heptachlor Formulations.
- xiv. Trithion Formulations.
- xv. 2, 4-D Sodium salt Formulations.
- xvi. Imidan Formulations.
- xvii. Sulphur Formulations.

II. INPUTS REQUIRED FOR AGRICULTURAL,

ANIMAL HUSBANDRY, FISHERIES PROGRAMMES Etc.

A. Mechanical Engineering products:—

1. Electric Motors—3-5 H. P.
2. Diesel Engines—5-10 H. P.
3. Pumps.
4. Agricultural Implements.
 - i. Mouldboard ploughs.
 - ii. Three - tine reversible shovel cultivator.

- iii. Three-row seeding attachment.
- iv. Ridger attachment.
- v. Sweep attachment.
- vi. Patella with hooks.
- vii. Turn wrest plough.
- viii. Ridger.
- ix. Akola hoe.
- x. Cotton Seed-drill.
- xi. Wet land ploughs.

GOVERNMENT OF MADRAS

CHEMICAL TESTING AND ANALYTICAL LABORATORY,

Industrial Estate — Guindy — Madras-32.

Phone No. 80141—Extn. 5

A DIVISION OF
THE DEPARTMENT OF INDUSTRIES AND COMMERCE

UNDERTAKES FOR THE PUBLIC

Testing and analysis of minerals, ores, other industrial raw materials and finished products, sampling of ores and minerals at pit heads, ports, loading stations etc. according to International methods of sampling and issues appropriate certificates.

Physical testing of metals and alloys for tests such as tensile strength, compressive strength etc. are also undertaken. Work on beneficiation of low grade minerals and ores is also carried on at the laboratory.



Also offers :

ADVICE ON CHEMICAL & ALLIED PROBLEMS
OF INDUSTRY

For detailed information apply to :

THE JOINT DIRECTOR OF INDUSTRIES AND COMMERCE,
(C. E. & T.)

CHEMICAL TESTING AND ANALYTICAL LABORATORY,
Industrial Estate :: Guindy, Madras-32.

A FUNCTIONAL ESTATE FOR ELECTRICAL INDUSTRIES

The Government of Madras have sanctioned a scheme for the establishment of an Industrial Estate for Electrical Industries in the Fourth Five Year Plan Period. This estate is likely to be located near Madras and to start with, it will have sixteen units. This proposed Electrical Industrial Estate will be the third Functional Estate in this State, the Estate for Leather goods at Madhavaram and the other one for Ceramic Industry being the two estates set up during the Third Plan and functioning already.

There exists an enormous scope for the establishment of electrical engineering industries in Madras State as the production by the existing industries is not adequate to meet the growing demand. Also consequent to the programme for further power development in the state, there will be demand for both the common types of electrical goods such as lamps, transmission line

accessories, motor starters, control equipments, overhead conductors, small motors, domestic appliances etc., and heavy electrical equipments like transformers, circuit breakers etc. In this context, the establishment of a functional industrial estate for electrical engineering industries would enable the grouping of such industries in one place to achieve organised development in the industry, overcoming problems such as lack of proper technical know-how, service facilities, skilled technicians etc. It is expected that the industrial estate contemplated under this scheme would also help to increase the output and marketing in addition to creating quality consciousness to bring it to international standards for facility of export.

The estimated capital outlay on this new scheme, which has been prepared by the technical officers of the Directorate of Industries and Commerce to achieve the objects enumerated above is about Rs. 23 lakhs.

MADURA MILLS CO., LTD.

Madurai - Tuticorin - Ambasamudram (Madras State)
and Serampore (West Bengal)

Manufacturers of **COTTON YARNS - INDUSTRIAL FABRICS - CLOTH**

Managing Agents : A. & F. HARVEY LTD., Madurai - South India



HARVEYS OF MADURAI

SERVICE CENTRE FOR ELECTRO-MEDICAL EQUIPMENTS

The Government of Madras have sanctioned a scheme for the establishment of a Central Service and Repairs Cell for Electro-Medical Equipment in this State in the Fourth Five Year Plan period.

Consequent to the increased use of electrical apparatus and devices of all kinds in hospitals, clinics and doctor surgeries, necessity has been felt for a common service centre for a periodical check up and repairs of the delicate instruments. With a view to obviate the difficulties experienced by these institutions in getting their electric and electronic equipments properly serviced by competent staff, the technical officers of the State Directorate of Industries and Commerce prepared a scheme for the establishment of a Central Service and Repairs cell for Electro-Medical Equipments

at Madras which has been sanctioned by the Government.

The proposed centre will function under the administrative control of the Director of Industries and Commerce and under the functional control of the Director of Medical Services. The centre will be headed by an officer of the rank of a Deputy Director of Industries who will be assisted by two Assistant Engineers one at Madras and the other at Madurai. The scheme envisages setting up a Central Workshop at Madras under the control of the Assistant Engineer, Madras to attend to the major repairs to the equipments. The scheme involves a non-recurring expenditure of Rs. 4,50,000 towards the cost of land, building, machinery etc. and recurring expenditure of Rs. 70,000 towards cost of raw materials, contingencies etc.

For PAINTS, VARNISH & DISTEMPERS

— Contact —

METHA PAINT WORKS

C-15, Industrial Estate, Ambattur, Madras-50.

— Administrative Office: —

"Metha House"

No. 15, VENKATACHALA MUDALI STREET, PARK TOWN, MADRAS-3.

HANDICRAFTS SCHEMES SANCTIONED FOR IMPLEMENTATION IN THE FOURTH PLAN PERIOD

TRAINING CENTRE FOR SILVER FILIGREE AND ENAMELLED JEWELLERY

The silver filigree wares of Orissa, with age-long traditions, are too well-known to need any special mention. No less interesting and important is the enamelled jewellery of Rajasthan. These articles of exquisite workmanship have a good demand at home and a potential market abroad. With a view to introduce and popularise these crafts in our state, the Government of Madras have sanctioned a scheme for the establishment of a Training Centre at the College of Arts and Crafts, Madras.

Under the scheme, training in these crafts will be imparted to 25 candidates for a period

of ten months on payment of a monthly stipend of Rs. 60 each. On completion of the training, the trainees will be organised to form a Production-Cum-Marketing Society to produce silver filigree and enamelled jewellery of high artistic standards to meet the export requirements besides the local demand.

The scheme involves an expenditure of Rs. 25,900 non-recurring towards the purchase of machinery and equipments and Rs. 24,300 recurring per annum towards cost of raw materials, establishment, stipend and contingencies. ★

POLISHING OF GRANITE STONES

Varieties of granite stones of pink, grey and black colours available in Salem, North Arcot, Tiruchirapalli and Ramanathapuram districts take a very high grade of polish which can find a big market in European countries like Britain, Germany and France for building decoration and monuments etc. In order to exploit this natural resource available in plenty in this state, the government have sanctioned a scheme for the establishment of

a Production Centre for polishing of granite stones at Krishnagiri in Dharmapuri district. This proposed unit with mechanised polishing equipments involves a non-recurring expenditure of Rs. 46,000 and the estimated annual recurring expenditure is Rs. 19,000. It is interesting to note in this connection that granite polishing factories located in Mysore and Andhra Pradesh are reported to be prosperous. ★

METAL HANDICRAFTS AT NACHIARKOIL

There are about 100 private units at Nachiar-koil in Thanjavur district engaged in the production of artistic brass and bell metal articles and more than half of the total

production in these units is exported to countries like Ceylon and Malaysia. But one is surprised to see these units still adopting the old crude methods of production. One

Reason for this state affairs is that these artisans cannot afford to purchase the improved contrivances used in the trade.

In order to facilitate these people to adopt improved techniques of production the Government of Madras have sanctioned a scheme to set up a Common Facility Centre for Metal

Handicrafts at Nachiarkoil and help the artisans in burnishing, turning, polishing and finishing of their products at a nominal cost and to earn a better living and to improve their production capacity.

The scheme involves an expenditure of Rs. 231,000 non-recurring and Rs. 11,800 recurring. ★

PALM-LEAF PRODUCTS

Palm leaf industry is one among the prominent handicrafts in Madras State concentrated mainly in the districts of Ramanathapuram, Tirunelveli, Chingleput and Thanjavur in the coastal areas. Palm-leaf products are sold throughout the country through the local merchants. It is reported that there is a good demand for good quality palm-leaf products in foreign countries, but the production capacity of the workers in the above districts is very limited. In order to improve the quality and maintain the

standard of the articles meant for export and to meet the foreign orders which are generally in bulk supply within a specified short period, the Government of Madras have sanctioned a scheme for the establishment of a Training Centre for the manufacture of palm-leaf products at Rameswaram in Ramanathapuram district. The scheme involves a recurring expenditure of Rs. 15,500 and a non-recurring expenditure of Rs. 19,800 per annum. Under this scheme, training will be imparted to twenty candidates for a year on payment of a stipend of Rs. 30 per mensem each. ★

Install

R M F

Direct Coupled & Belt Driven Centrifugal Pumps
Reciprocating Piston Type Domestic Pumps

ALSO

Manufacturing Perkins Diesel Engine Conversion Kits and Spares for all types of Engines, Electric Motors, Ever Cleaners and Coiler Conversion for Carding and other Textile Mill Spares

For Particulars:

RAMU FOUNDRY

Pappanaickenpalayam, Post Box No. 115, COIMBATORE-1

Telegrams: **Impeller**

Telephone: { Office: 4212
Residence: 3456

Branch at: 35/37, THAMBU CHETTY STREET, MADRAS-1

PRODUCTION-CUM-TRAINING CENTRE FOR DRESSED DOLLS AT MADRAS

A Design centre to impart advanced training in the making of dolls and toys with competent staff and a team of Japanese experts has been functioning at Madras and thirty six candidates had already been trained in this centre. As there exists a good demand for dolls depicting regional costumes, mythological characters, historical figures etc. both in the country and abroad, the starting of a Production Centre for the manufacture of Dressed Dolls at Madras

was under contemplation and the Government have now sanctioned for the setting up of this centre with a view to meet the demand for export of these exquisite dolls and also to provide employment to the persons trained in the centre.

Ten candidates will be trained in this Production-Cum-Training Centre on payment of a stipend of Rs. 50 each per mensem for a period of one year. ★

ARTISTIC LEATHER ARTICLES

There is a good market for leather goods in foreign countries and also considerable local demand. There is a very good export demand especially for articles like artistic leather bags and they can be exported in considerable quantities. With this aim in view, the Govern-

ment of Madras have sanctioned a scheme for establishment of a Production Centre for the manufacture of Artistic Leather Articles at Pallavaram in Chingleput district. The scheme involves an expenditure of Rs. 1,56,000 non-recurring and Rs. 5,30,700 recurring per annum.

Safety First

For All Your Domestic & Industrial Wiring

ALWAYS USE

INCA CABLES and WIRES

THE BEST BY ALL TEST SAFE & DEPENDABLE
MANUFACTURED BY THE PREMIER CABLES
MANUFACTURING FACTORY IN SOUTH INDIA

The Indian Cable & Wire Industries

P. B. 2637

C. 32 - 34, INDUSTRIAL ESTATE — GUINDY — MADRAS - 32

Phone: 80528

Grams: VICANDU



off the ALIND reel...
only premium quality!

It is long experience with aluminium which keeps Alind in the lead! For over 15 years now, Alind has been producing aluminium cable—longer than any other manufacturer in the country...

from ACSR to "Solid" underground, Alind's wire-drawing, stranding, extruding and compounding techniques, developed

over the years, are your guarantee for the quality and dependability of its cables.

DGS & D Rate Contract
ISI Certification Mark
Fire Sectional Committee Approval



ALIND
THE ALUMINIUM INDUSTRIES LTD.
India's largest manufacturers of aluminium conductors and accessories
Registered Office: Kundara (Kerala)
Plants: Kundara • Mirakud • Hyderabad
Managing Agents:
SESHASAYEE BROS. (TRAV.) PRIVATE LIMITED

IMPORT SUBSTITUTION

GRAPHITE CRUCIBLES

Carbon-bounded graphite crucibles based on the technical know-how developed by Dr. H. P. S. Murthy of the National Metallurgical Laboratory are now in production in India. It may help in import substitution of this item. Graphite crucibles are extensively used in metallurgical industries. With the setting up of a few more units (at present pro-

duced only in Bihar) it is hoped that the total demand for these crucibles can be met from indigenous sources. To give a boost to the production, development, standardization and testing of graphite crucibles, the Government is thinking of setting up a special research centre under the direction of National Metallurgical Laboratory.

FORSTERITE REFRACTORY

Another product which has been successfully developed by the National Metallurgical Laboratory is forsterite refractory, a substitute for forsterite checker refractories that are now being imported from abroad. Such refractories are needed by steel plants. Hence a number of ways are being explored to set up a manufacturing unit near a steel

plant. National Metallurgical Laboratory's work on this product has gone beyond the stage of pilot plant and it is claimed that these National Metallurgical Laboratory products give the same service as the imported ones and in fact even prove slightly superior to the imported varieties.

ANTHRACITE COKE

A third series of products developed by the refractories division of the National Metallurgical Laboratory is substitutes of various grades of anthracite coke. Since no anthracite has been found in India yet, National Metallurgical Laboratory scientists have developed techniques for processing the petroleum coke from oil refineries and some high volatile coal into a hard material. At the moment, all the anthracite coke needed in India has to be imported.

The substitute developed by National Metallurgical Laboratory can be used as a raw material for anode and cathode linings of aluminium cells. Since the Aluminium industry is expanding, increasing amount of anthracite coke would be required unless substituted with suitable indigenous materials. The new process has completed the laboratory stage and pilot plant investigation is reported to be going on.

'RECLAMATION' OF USED LUBRICANTS

The Indian Institute of Petroleum has devised a special process for 'reclamation' of used lubricating oils which is expected to result in a saving of considerable foreign exchange. It has also been reported that agreements have been signed between the Institute and some private entrepreneurs for

establishing commercial plants with know-how provided by the Institute. At present almost the entire demand for lubricating oils is met mainly from imports.

The Institute has also done useful research on testing of aviation turbine fuel to make travel safer.

CSIO DEVELOPS NEW INSTRUMENTS

The Central Scientific Instruments Organisation, Chandigarh, has begun to develop instruments for release to industries for commercial exploitation.

With the paucity of foreign exchange, demand for indigenous fabrication of accurate scientific instruments has increased tremendously. The CSIO has been trying to meet that demand partially. Even so, the task is too big and, therefore, cannot be achieved in a short time.

Lately the CSIO has developed the following instruments which can be licensed for commercial exploitation.

Transistorised Stimulator, Model 202 M: This electronic instrument provides rectangular pulses of controlled amplitude, frequency, duration and polarity and can be widely used in physiological and neurological studies.

Present-Counter Model 402 L: It can be widely used in counting batching and packaging equipment. Any desired number up to 1,000 can be pre-selected. It can also be used as a counter and by the addition of a few more decades of the type used, it can count up to several times this size per second.

Stabilised D.C. Power supply: Model 502 L: This instrument provides output from zero volt and offers low ripple content; it is highly regulated with low output impedance and is very useful for research laboratories for carrying out experiments on transistorised circuits, especially pulse circuits and low level amplifiers.

Electronic Temperature Controller, Model S: This is a mainsoperated on-off device for automatic control of temperature.

Lens polishing Machine: A motor driven, single spindle, variable speed lens polishing machine has been designed and fabricated. This can be put on batch production.

Besides developing these instruments, the CSIO has been helping the Atomic Energy Establishment in Trombay and has prepared a project report for the manufacture of microscope optics for a private Bombay firm. Testing and repair facilities of the CSIO are available to industries and research laboratories. There are three repair and maintenance units working under the CSIO at Chandigarh, New Delhi and Madras. It is likely that if enough demand is generated similar repair units may also be located at Calcutta and Bombay.

ALUMINIUM-BASED ALLOYS

The National Metallurgical Laboratory, Jamshedpur, has been able to develop some aluminium-silicon alloys, which are very useful in automotive industries.

These alloys, containing 9 to 11.5 per cent Silicon can be manufactured from raw materials available in this country.

Actually, these alloys had been developed in several foreign countries as well but no single modifying agent was available which could be effective in all the ranges of these alloys. National Metallurgical Laboratory has been able to develop such an agent in India.

Preliminary findings about these alloys were presented at the International Foundry Congress in Amsterdam in 1964. This attracted considerable attention in West European countries.

The result was that when the process was ready, it was released for commercial exploitation in Europe first. It is now available to any industrial manufacturer in India on normal terms.

Another use of aluminium, which is under development at National Metallurgical Laboratory relates to the production of aluminium bronzes. These alloys, when successful, are expected to save considerable amount of normal bronzes that are made of totally imported materials.

Various types of aluminium bronzes have been melted in indirect electric arc furnaces with or without fluxes to reduce or even eliminate the introduction of gases and oxide inclusions in the cast products.

One of the preliminary findings is that the use of the electric furnaces has considerably lessened the melting period. The effect of the chemical composition on mechanical properties is being studied, including the micro-structure of these alloys.

A third approach has been made at producing foam aluminium using certain foaming agents such as titanium hydride and sodium metaborate. Further work is being done now but enough results have been recorded to inspire confidence in developing a process for the production of foam aluminium.

Foam aluminium is used in many industries and it has tremendous possibilities in the Indian industry.

National Metallurgical Laboratory's introduction in developing more uses for aluminium, which is available indigenously, derives from the fact that aluminium can be substituted for a number of non-ferrous metals in several industries and products. It will help to conserve substantial amounts of foreign exchange and also obviate the necessity of paying for foreign technical know-how.

Phone No. 89390

SARVODAY INDUSTRIES



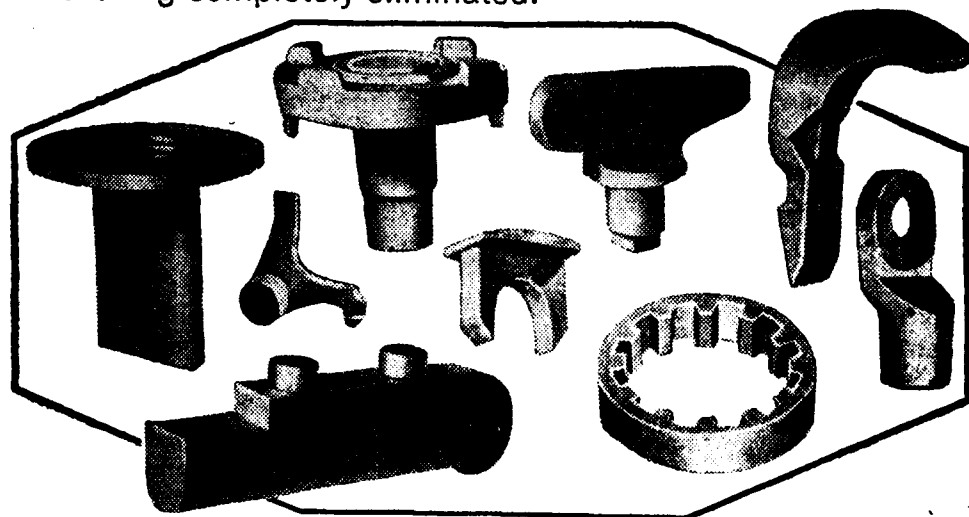
Manufacturers of:

BICYCLE FULL OILBATH GEARCASES
AND DOMESTIC WICK STOVES

2/38-A, G.S.T. Rd., ISSA PALLAVARAM.
(Near Madras)

HOT-STAMPED ELECTRICAL COMPONENTS IN COPPER & BRASS

Mass produced to ensure low cost. Close dimensional accuracy ensures interchangeability. Intricate shapes hot-stamped with ease. Flawless quality with superior finish. Necessity for machining completely eliminated.



MANUFACTURERS
NATIONAL FASTENERS PRIVATE LIMITED
102-D, Mount Road, Nandanam, Madras-35

Selling Agents
SOUTHERN ENTERPRISES
7, Smiths Road, Madras-2

EP-NF-9

GROWTH OF INDIA'S GLASS AND GLASSWARE

INDUSTRY

The Indian glass and glassware industry ranks high amongst the many industries that have made quite an impressive progress in recent years. This progress has been the result of the policy of planned expansion adopted by the Government through her Five Year Plans. The technique of glass making was known in the country many hundred years ago, but the industry in the modern sense was started towards the end of the last century and real progress was made only after 1950 when Government established the Central Glass and Ceramic Research Institute at Calcutta and the Indian Standards Institution at Delhi and began to correlate and coordinate the development of this industry with other industries like drugs, pharmaceuticals, chemicals, etc., that requires glass and glassware for packing and other purposes.

At the beginning of the First Plan, there were 109 Glass factories manufacturing blown-ware and pressed ware and 3 units manufacturing sheet glass. Today, there are 140 glass factories registered under the Industries (Development and Regulation) Act, having an installed capacity of over 4,00,000 tons per year. During these 14 years of the three plans, the total output of glass and glassware has risen from 1,12,000 tons in 1951 to about 2,50,000 tons at present, and is expected to exceed 4,00,000 tons in 1965-66.

The technological side of the industry has been strengthened as a result of collaboration with a number of foreign manufacturing

concerns of U. K., U. S. A., West Germany, U. S. S. R., Belgium and Japan. Today, a dozen units are collaborating with a number of foreign firms which specialize in specific lines of production. A number of large units are coming up with the latest types of furnaces and modern automatic processes for production and control.

The installation of modern machines and furnaces and the introduction of latest techniques of production, have helped not only in stepping up production, but also in diversifying the products. India now produces a variety of glass and glassware of different sizes, shapes and designs which include sheet and safety glass, bottles and vials, laboratory glassware and vacuum flasks, railway signals glass wool and various types of tableware. Recent developments in the field include the production of optical glass at the Central Glass and Ceramic Research Institute at Calcutta, ophthalmic glass at Durgapur in collaboration with U. S. S. R., and improved types of scientific and laboratory glass by Borosil at Bombay in collaboration with a leading U. S. firm and wired and figured cast glass by the Pittsburg system.

The industry has made headway not only in the sphere of production, but also in the field of exports. During the past few years, India's exports of glass and glassware have been in the range of Rs. 30-35 lakhs. Prominent

among India's glass items of export are sheet glass, vacuum flasks, bottles and phials, illuminating glasswares, bangles, beads and imitation pearls and scientific glassware. Besides, items such as glass tubes and rods,

laminated safety glass and glasswares for house hold and domestic use are also being exported. These items of export compare well in quality with the products from many advanced countries. ★

✓ NEW RESEARCH IN COMFORT PROPERTIES OF LEATHER GOODS

Increasing competition from the synthetics has stimulated greater emphasis on research in maintaining and improving desirable qualities of leather. The choice of footwear and other materials is decided by the degree of comfort afforded by the materials.

Various physical properties which will influence the comfort properties in footwear, handwear and clothing are thermal conductivity, dimensional changes, water vapour permeability, water absorption, rate of water absorption, and water vapour absorption, resistance to perspiration, resistance to stiffening, reservoir capacity, stretching property, ability to be made stronger and more flexible with moisture, fatigue resistance, thermal lasting property, heat resistance, strength properties, ability to undergo lateral compression, plasticity, frictional properties, electrical properties, oil resistance scuff resistance, mechanical or foot insulation, resistance to nail penetration, colour fastness, insole shrinkage and lightness.

Comfort in footwear is dictated by the initial fit of the shoes and its retention during wear, the response of the shoes to the forces involved in walking, the resistance of the outer covering of the shoe to weather and the reaction of the materials—the features which provide initial sales attraction—style, colour, texture and those which show their presence in wear including colour fastness, resistance to scuffing, response to repeated flexing and ease of polishing.

The comfort properties of the leathers which are used for footwear, handwear and clothing will vary depending upon the environmental conditions and physiological factors. Although considerable information has now been accumulated about the physical properties of several different kinds of leather, our knowledge on comfort properties of leather is not yet complete since little or no attempt has hitherto been made to evaluate quantitatively the comfort properties of leather used for different purposes in different environmental conditions.

The Central Leather Research Institute at Madras is at present carrying on investigations to fill this gap. The line of research is firstly to obtain fundamental properties affecting the desirable qualities of leather which will open the way to greater variety and improvements in the desirable qualities of leather. Secondly, it is to develop test procedures for quantitatively evaluating the comfort properties of leather to devise methods for measuring and relating them to physical and chemical data.

Fibre study would lead to finding out which properties are needed for imparting comfort to the leather user and what optimum values of the properties are required to use leather under different environmental conditions.

In the search for comfort properties of leather one of the obvious requirements is to discover some methods to evaluate the properties of the

materials used in the production of various products. In order to evaluate leathers and substitutes, tests can be conducted by watching the performance of leathers and substitutes on the feet of selected groups of postmen, policemen, school children, nurses and workmen.

After evaluating the various comfort properties of different leathers, the tanners will no longer sell leather as a package but will sell leather with specific qualities and performance characteristics. Leather will be sold on the basis of what it can do for their customers, for retailers and for consumers. ★

WHITE PRINTING PAPERS FROM RICE STRAW

Pilot plant trials for producing printing papers from rice straw soda pulp with and without admixture of bamboo sulphate pulp and sabai grass soda pulp have been conducted at the Forest Research Institute, Dehra Dun. They have shown that under mild digestion conditions, rice straw gives bleachable pulps in good yields which can be used for production of white printing paper of satisfactory strength properties by mixing minimum 10 per cent bamboo or sabai grass pulps. Hundred per cent rice straw could not be run smoothly on paper machine.

Bleached rice straw soda pulp from uncut rice straw, bamboo sulphate pulp from chipped bamboo and sabai grass, soda pulp from uncut sabai grass, were prepared. Bleached pulps were beaten in laboratory beater according to Tappi Standard T200 ts 61 and 3 per cent resin soap, 9 per cent china clay were added to the finish.

Printing papers were produced on the old machine of 86 cm. deckle, using different proportions of rice straw and bamboo or sabai grass pulp. All papers were of 60 g. s. m. basis weight and were made at a speed of 12m/min. ★

NEW WAYS OF DISPOSAL OF RADIOACTIVE WASTE

Scientists in the laboratories of the Indian Atomic Energy Establishment at Trombay have been looking for ways of reducing the bulk of the radioactive waste that has to be buried. Recently an advanced semi-commercial incinerator plant, designed by the gas cleaning research laboratory of the waste treatment division, has been installed at Trombay. It can reduce the volume of combustible wastes between 50 and 90 per cent and their weight by as much as 99 per cent.

Since the radioactivity level of gases emerging from the incinerator is some 1,00,000 times the maximum permissible level, cleaning is essential, particularly to remove the very fine particles that contain most of the activity.

Instead of the more usual wet scrubbing processes, that have the disadvantage of giving rise to contaminated liquid waste, the new incinerator incorporates a completely dry cleaning process.

From the multi-chamber incinerator furnace, used to achieve high combustion efficiency, the flue gases pass through cooling ducts, before entering a bag filter. The temperature in the furnace may be as high as 1000°C while fabric filtration is carried out at a temperature between 100 and 250°C depending on the type of material used. During the course of trials in a pilot plant several fabrics of indigenous materials have been tried out. ★

NEW ROT-PROOFING AGENT FOR TEXTILES

Production of textile materials against the attack of micro-organisms has come very much to the fore particularly in connection with military equipment and goods destined for use in tropical regions.

Sriran Institute for Industrial Research has developed a series of compounds known as Srifircides, with excellent rot proofing efficiency effective at 0.1 to 1 per cent concentrations against microbes. Unlike conventional copper-naphthenate based compounds, Srifircides do not accelerate actinic degradation, and do not adversely affect the handling of the treated materials.

The Institute has done useful work in developing anti-shrink wool process also. Woollen garments shrink out of fit as a result of felting during washing. The Srifirlan process has been developed by SRI to eliminate this drawback. The advantages of this process are improved feel and handle, uniform treatment and excellent shrinkage control. The process has been leased out to a leading woollen yarn processor. Attempts are also being made to extend the process to woollen hosiery items for defence needs. ★

INDIGENOUS COOLANT FOR CARS DEVISED

Among many difficulties faced by jawans on high altitude has been the freezing of coolant water used in automobile engine radiators. The authorities were using imported composition with water in jeeps and trucks to keep them going.

The Defence Research Laboratory (Materials), Kanpur, has now evolved an

anti-freeze coolant. The coolant composition is being manufactured indigenously. Some of the supplies so far to forward areas are expected to save over Rs. 2 lakhs in foreign exchange.

As the road construction work in the border areas is gaining momentum, the demand for the anti-freeze coolant is mounting. ★

TECHNIQUES IN FOOD PRESERVATION

The need of nourishment, that exists for all peoples at all times, is without question the first problem that humanity must face daily and one which is reflected in the social order of the world.

The preservation of food products is one of the most interesting aspects of nutrition.

The habit of preserving foodstuffs is as ancient as civilization, but the modern industry of food preservation - based on the marvels of scientific knowledge about the fermentation of substances - had its beginnings only at the

start of the last century and its development was slow.

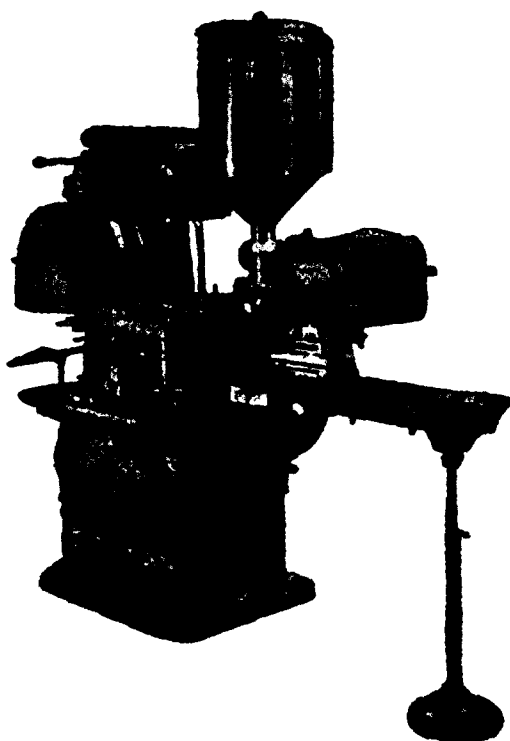
For the first 40 or 50 years, food processing or preserving was modest, completely done by hand, and was often secretive about details for fear of competition. It was only near the end of 1,800 that invention of certain machinery brought a true and proper industry of food preservation into existence. From then on, this industry's progress has been miraculous. As an example, it can be calculated that with respect to 1940, today's vegetable preserving has increased 150%.



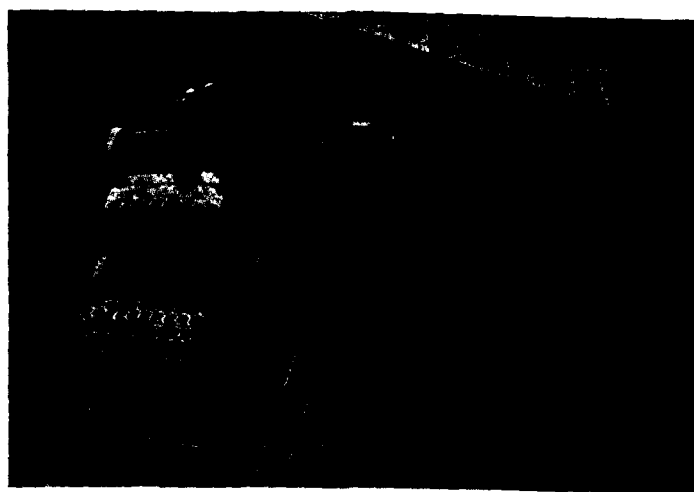
Series of automatic seaming machines for round cans of from 50 to 1150 mm. diameter and from 40 to 195 mm. height. Maximum speed: 400 cans per minute. By Officine Cevolani, Bologna



Continues plant: Steam feeding group with super-heated vapour, controlled extraction, feed and circulating pump. By Ing. A. Rossi, Parma



Group of automatic filling and seaming machines for cans of oil, complete with automatic feeding of the empty can and automatic cover feeder.
Capacity: 25-30 cans per minute.
By Luciani, Parma



Automatic, continuous-line machinery for the production of peeled tomatoes. By Tito Manzini & Figli, Parma

The Italian food preserving industry is replete with the most modern plants that are technically perfected and equipped according to the dictates of the most up-to-date preserving systems.

MACHINERY FOR PRESERVING VEGETABLES

Following concepts of modern technology, Italian preserving machinery complies with new social needs that require constant improvement in food product, especially in terms of nutritive values and results.

For the production of tomato concentrates, new condensing machines are made with a single vertical cylinder of stainless steel that functions continuously at low temperature. These completely automatic evaporation plants have revolutionized the making of tomato puree. The vapour in these is saturated because it is de-super-heated under vacuum; its thermal yield is superior to vapour under pressure and results in greater economy.

Tomato juice, in these types of plants, can be condensed up to the point of obtaining 40% to 42 % dry residue at temperatures from 60 to 62 degrees centigrade.

In addition, the time that the product stays inside the apparatus is reduced to a minimum while the condensed tomato product retains, to a high degree, the organoleptic characteristics of the fresh juice and its odour, taste, colour and vitamin content.

The degree of condensation of the product is automatically regulated by an electronic refractimeter that controls a motor-driven valve through which the product is released.

These condensing plants are constructed in various process-capacity models; the largest processes about 300 tons of fresh tomatoes in 24 hours.

Work cycle includes, in addition to the washing machine, the grading and crushing of

the tomatoes, the preheating of the crushed pulp and the extraction and refining of the juice.

After condensation, the product is immediately pasturized and canned. New water-spray, cooling-drying machines are manufactured for handling the finished cans of tomato concentrates.

Work cycle for peeled tomato preservation includes pre-washing, gauging, final washing, grading and superficial scalding of the tomatoes, automatic peeling, canning, pre-heating and sterilization of the canned product.

All the parts of these machines that come into contact with the product are of stainless steel—early and rapidly removable for cleaning, to give maximum hygienic working conditions.

Automation is the keynote in all the various stages of processing preserved vegetables. There are special machines with loading and unloading apparatus for filling cans, for handling empty or full cans. These effect noticeable economies in both internal and external materials-handling. Washing, interior handling and warehousing of the wooden cases for the cans of tomato products are mechanized, as well as many of the smaller operations in to-day's modern factory.

Italian manufacturers of machinery for the production of preserved vegetables, especially those for processing tomatoes, have brought this industry to a most modern level of specialization to cope with markets that grow and grow.

Some of the important food-processing plants, recently completed in France, Spain, Portugal and Greece and in other countries in and outside Europe are equipped with Italian machinery—ample proof of the top-place position held by Italy in this sector.

MACHINERY FOR PROCESSING FRUIT JUICE

Only after a certain commercial success was obtained in fruit juices (1963's exports were valued at \$/11,200,000) did the development of an autonomous and fast growing industry determine the specific technologies and appropriate machinery needed for the processing of each juice product.

Italy's production of fruit juices grew in three stages:

Sicily's concentrated citrus fruit juice industries have been highly successful since right after the war. This was the result of the introduction of juice extraction machinery which eventually helped mechanize work that had previously been handled manually.

Another period of exceptional goahead, after the war, was the progress in processing

tomato juice with new systems created by many food industries in the Campania region. These rapidly won new export markets, particularly England.

The third and most striking period of advancement was the launching of 'nectars' sweet fruit drinks that after a rather slow, but continuous acceptance gave birth to a flourishing industry with enormous production.

These three steps in the progress of Italy's juice industry are the merit of the constant mechanical improvements developed by the food preserving machinery industry to meet all needs in advancement.

This manufacturing structure of specialization in techniques and talents is the reason for the success of Italian food preserving machinery all over the world. ★

Grams: TOOLS

Phones: { 21763
24751
25629

S. D. RANGWALA & CO.,

POST BOX No. 1659

289, LINGHI CHETTY STREET, MADRAS-1

Stockists & Suppliers of:

BRASS AND COPPER RODS, SHEETS, PIPES, STRIPS, WIRE, COPPER BOAT NAILS, RIVETS & WASHERS, BOLTS & NUTS, SCREWS, RIVETS, SHIP CHAINS, WIRE ROPES, ENGINEER'S PRECISION INSTRUMENTS AND OTHER GENERAL HARDWARE MATERIALS.

Suppliers to:

RAILWAYS, STATE AND CENTRAL GOVERNMENT DEPARTMENTS, LEADING INDUSTRIAL UNDERTAKINGS.

MECHANICAL RICE TRANSPLANTER

FARMERS AND AGRICULTURAL EXPERTS EVINCE KEEN INTEREST

Indian farmers and agricultural experts are showing keen interest in the British made mechanical rice transplanter which is being demonstrated in various parts of the country this month. Easy to operate and cheap, it can be made for about £ 5 (Rs. 105) the transplanter enables a two-man team to do the work of 50. Experts believe that this simple machine marks a step forward towards a mechanized pattern of paddy cultivation in the developing countries.

Earlier this month, the transplanter was tested at the Government of India's Tractor Training and Testing Station at Budni, in Madhya Pradesh. There it was seen in action by the Station's director, Mr. P. J. Zachariah, agricultural engineers from the rice-producing areas of India, and a large number of local farmers.

DESIGNED IN BRITAIN

The transplanter was designed by the Overseas Liaison Unit, which is sponsored by Britain's Ministry of Overseas Development in conjunction with the National Institute of Agricultural Engineering. Superintending in trials in India is Mr. D. H. Sutton, of the Overseas Liaison unit.

Interviewed in Delhi, Sutton said: "Interest in the transplanter has been fantastic. Many of the Indian farmers who saw the demonstrations wanted to start using the machine right away. I had to explain that so far we are only trying it out. It is not yet being made commercially".

Mr. Sutton's one-month visit to India is part of a world tour of rice-producing countries. After his stay in Delhi, where he met Mr. C. S. Sridharan, Deputy Agricultural Commissioner, Indian Council of Agricultural Research, he went on to the Regional Research

and Testing Centre in Cuttack for further demonstrations of the rice transplanter. On July 24 he flies to Kuala Lumpur, Malaysia. Later in the year, Mr. Sutton plans to visit South India.

Data collected during Mr. Sutton's demonstration tour will be sent to the Overseas Liaison Unit in Britain to enable the designers there to carry out any modifications to suit conditions in individual countries.

The transplanter-intended as Britain's contribution to International Rice Year being observed in 1966—is handoperated and is equipped with a tray in which the seedlings are placed. A finger mechanism picks up the seedlings and plants them in the soil with a simple lever action. The transplanter rests on two wooden floats which enable it to move smoothly in Paddy fields.

EASY TO MAKE AND MAINTAIN

Earlier trials in Ceylon and Burma have shown that it has an output rate of 2½ acres per eight-hour day, compared with the usual hand-planting rate of one acre per day involving 75 people. It is estimated that the mechanical technique will enable the small holder to obtain two crops in a year off the same land.

Early in July this year the transplanter was displayed at the Royal Show held at Stoneleigh, near Coventry. This was arranged by Massey-Ferguson (Export), the company which is introducing the transplanter to markets in developing countries. It is hoped that eventually the machine, which is made mainly of wood with a few small metal parts, will be manufactured in the countries in which it is to be used. It is so simple it could be made and repaired by village craftsmen. ★

YARN APPEARANCE EXAMINING MACHINE

The South India Textile Research Association (SITRA), Coimbatore has fabricated a Yarn Appearance Examining Machine for the purpose of examining and comparing yarn in regard to quality, evenness, regularity etc. The machine is arranged to wrap yarn on the black boards according to A. S. T. M. specifications which are as follows:

Counts 7 to 16-5s, 16-5 to 32s, 32 to 65s, 65 to 125s. Wraps per inch 20 26 38 48

The special features of this new machine are:

1. The different number of wraps per inch as required can be obtained by simply

shifting the gear knob to the desired position.

2. The machine can be used for rectangular boards upto a maximum size of 16 inches width and also taper boards of length upto 12 inches.

3. All driving gears and chains are completely enclosed to obtain a good appearance.

This is a hand-operated machine and is very simple in operation. For your requirements SITRA may be contacted. ★

PROCESS TO CHANGE PEPPER COLOUR DRIED CARDAMOM IS ALSO MADE GREEN

The Central Food Technological Research Institute, Mysore has developed a process for converting green pepper into white pepper. With some improvement on the outward appearance, the product, which has croked favourable response from abroad, has very good export prospects, the Institute claims.

The process consists of first removing the skin of green pepper by steaming and passing through a pulping machine. It is then treated with sulphur dioxide and dried.

The Institute has also evolved a technique by which cardamom can be made to retain

its natural green colour during drying and storage. It consists of alkali treatment, a process commonly used in the case of green vegetables. The process requires use of fresh cardamom, with its natural green colour, which is first soaked in a two percent solution of washing soda for 10 minutes, dried and then packed in polythelene lined gunny bags.

Cardamom with its natural green colour has a better consumer appeal and commands a better price in foreign markets. ★

WET PROCESS CEMENT PLANT

The Cement Corporation of India will, it is learnt, purchase a 600 tonne wet process cement plant from K. C. P. Ltd., Madras.

The suppliers are now completing the

erection of two Wet Process Cement Plants of 600 tonnes capacity for the Orissa Government. They will be supplying two more plants of similar capacity to the Madras State Industrial Development Corporation.

NEWS AND NOTES

DEVELOPMENT OF MINERAL RESOURCES IN MADRAS STATE

A. U. N. Geological expert has investigated the possibilities of mineral development in Madras State and suggested a detailed 1.6 million scheme for the exploration of non-ferrous mineral deposits in the State, it is learnt. He has suggested that U. N. assistance could be sought for this purpose.

The scheme has been forwarded by the State Government to the Centre with a request to approach the U. N. for assistance to finance the project which can be completed, according to the expert, in three years.

The objectives of the project include economic evaluation of known and partially developed zinc-lead-copper ore deposits of Mamandur in North Arcot District, similar work on other mineral indications, general exploratory survey for new deposits over the project area of 12,500 sq. km. in North Arcot, South Arcot and Salem Districts, training of Indian personnel in the techniques of modern instrumentation to be used in the programme, etc.

The expert visited Madras in May following a request from the State Government for U. N. assistance in such a project. On the basis of a close study, he has pointed out that a U. N. aided programme of this magnitude would mean much to a State whose mineral development is modest.

The expert has recommended enlargement of the project area from 8,800 sq. km suggested by the State Government to 12,50,000 sq. km. This will include an earlier known vermiculite deposit in Korati (near Tirupattur, in North Arcot district). The expert is understood to have expressed the view that very little of the project area has been geologically mapped and a good deal of basic data remains to be collected. The mineral occurrences in this area are magnetite (iron ore), economically important magnesite and zinc-lead-copper sulphide deposits.

He is understood to have advised aerial magnetometer and scintilometer survey, not done in the State before. Aerial photography and photo geological interpretation, an entirely new technique in this region, have also been proposed. The expert has referred to the possibility of enriching the magnetite iron ore in Salem District by pelletising. It will then be possible for evaluating the general tonnage potential of the Salem deposits.

As for the Mamandur deposits, the expert has emphasised the effectiveness of using diamond drilling for further exploration.

If the scheme comes through, the Madras Government will provide counterpart funds and staff required for early start of the project.

BRITISH HYDROGEOLOGIST TO WORK IN INDIA

LOCATION OF WATER WELLS IN MADRAS STATE

A British hydrogeologist, Mr. David Nixon Holt, will spend a year in India working with a team of experts concerned with locating water wells for the expanding city of Madras.

Recruited by Britain's Ministry of Overseas Development on behalf of the United Nations, Mr. Holt will be working with geophysicists, drilling and engineering experts carrying out a Special Fund Project for which the U. N. is the executing agency.

The area to be surveyed will be approximately 3,500 square miles surrounding Madras city. Mr. Holt will organize test drilling programmes and investigate wells in current

use. He will also train Indian staff in modern methods of groundwater exploration.

The United Nations Special Fund is providing the experts necessary to carry out the project as well as four drilling rigs, vehicles, and hydrological geophysical and geochemical equipment. The Government of Madras is making staff available for training.

Mr. Holt returned to Britain in 1964 for further studies after serving in Malawi for a number of years. Since then he has been a full-time student at the Imperial College of Science and Technology, London, carrying out research and preparing a thesis for a Ph. D degree.

Telegram: Coilspring

Phone: 80681

FOR
EVERYTHING
IN
SPRINGS

SOUTHERN AUTOMATIC INDUSTRIES,
SUPER B-2, INDUSTRIAL ESTATE,
GUINDY, MADRAS-32.

REPORT ON THE WORKING OF THE COMPANIES ACT, 1956 IN THE SOUTHERN REGION FOR THE QUARTER ENDING 30-6-1966

During the quarter ending 30-6-1966, 43 Companies with an authorised capital of Rs. 1086.81 lakhs were registered in the Southern Region consisting the States of Madras, Andhra Pradesh, Mysore, Kerala and Pondicherry. Of these 4 are public companies

with an authorised capital of Rs. 806.50 lakhs, 1 is an association not for profit, and the rest 38 companies are private companies with an authorised capital of Rs. 779.81 lakhs.

The following are the giant flotations during the quarter under report:

S. No.	Name of the Company	Public or Private	Object	Capital State
				In Crores
1.	The Housing Corporation of India Private Ltd.,	Private	To carry on the business of construction of buildings etc.,	1 Crore A.P.
2.	Mysore Minerals Ltd., (Government Coy.)	Public	To search, for minerals and precious stones.	3 Crs. Mysore
3.	Kerala Fisheries Corporation Ltd., (Government Coy.)	Public	To purchase acquire and take over as a going concern the boat building, fishing etc.,	5 Crs. Kerala

The enclosed statement shows the statewide and industry-wise classification of companies registered during the period under question.

The total increase in the paid up capital of the Companies during the quarter ending 30-6-1966 amounts to Rs. 882.97 lakhs.

49 Companies with a total paid up capital of Rs. 26.44 lakhs ceased to work during the quarter under report. Of these 23 companies with a paid up capital of Rs. 148 lakhs were struck off under Section 560 of the Companies Act, 1956 and the remaining 26 Companies with a paid up capital of Rs. 24.96 lakhs went into liquidations.

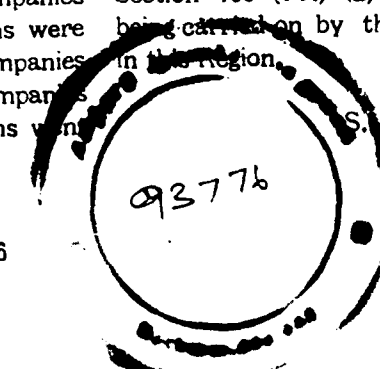
During the quarter under question 140 prosecutions were launched and 109 cases were disposed off.

During the period covered by the quarter Sri Bharathi Mills Ltd., a public company in Pondicherry has been taken over by Government.

The functions entrusted with regard to Section 108 (1-A) (a) of the C. A. 1956 are being carried on by the Registrars smoothly in this Region.

S. R. RAMAMURTHI,
Regional Director.

JULY-SEPTEMBER 1966



X8m, NUS
Nb 6.212

STATEMENT SHOWING STATEWISE AND INDUSTRYWISE CLASSIFICATION OF COMPANIES
REGISTERED IN THE SOUTHERN REGION DURING THE QUARTER ENDING 30-6-1966

Sl. No.	Industrial Classification	MADRAS		ANDHRA PRADESH		MYSORE		KERALA		PONDICHERRY		TOTAL	
		Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
0.	Agricultural and Allied Activities	...	1	1	1	1	1	2	1	1	1	4	1
1.	Mining and Quarrying	...	1	1	1	1	1	1	1	1	1	2	1
2.	Processing and Manufacture food stuffs.	...	3	1	2	2	2	2	2	2	2	6	2
3.	Processing and Manufacture Metals and Chemicals and Products thereof	...	1	4	2	2	2	1	1	1	1	8	1
4.	Processing and Manufacturing (not elsewhere classified)	...	4	1	1	1	1	1	1	1	1	6	1
5.	Constructions and utilities.	...	2	2	1	1	1	1	1	1	1	8	1
6.	Commerce (Trade and Finance)	...	3	2	2	2	2	2	2	2	2	6	2
7.	Transport, Communication & Storage	...	1	1	1	1	1	1	1	1	1	1	1
8.	Community and Business Service	...	1	1	1	1	1	1	1	1	1	2	1
9.	Personal and other services	...	1	1	1	1	1	1	1	1	1	1	1
Total		...	1	16	1	5	4	9	1	5	2	5	38

INVENTIONS ABROAD

CATCHING FISH WITH ELECTRIC NETS

A revolution in deep-sea fishing has been ushered in with the electric nets, which have now been successfully tried out in the North Sea by the German fishery research vessel, "Walter Harwig". An electric field attracts the fish, stuns them and thus prevents them from making a wild bid for freedom. On its very first expedition, "Walter Harwig" managed to increase the catch yield by forty percent.

Television photographs under water as well as the observations made by divers have revealed that shoals of fish, which are immediately at the opening of a fisherman's net, nevertheless succeed in getting away. In other words it was a matter of finding a technical means of attracting the potential prey and preventing it from fleeing. This was the problem, with which the German physicist Dr. C. O. Kreutzer, was concerned in the forties. In the United States, he worked on the construction of electrical apparatus for towing nets. His idea has now been taken over by the German fishery research vessel, "Walter Harwig", and tested for results.

The whole installation consists of a source of current, an impulse transformer, a high tension transformer, a high tension cable as well as transformers and electrodes on the towing nets. The controls are simultaneously equipped with measuring instruments. An electrical field with tensions of from 30 to 50 kilowatts arises between the positive and negative electrodes, which are made of copper gauze. Bursts of electrical energy can be emitted by means of the impulse transformer.

On the trial voyage made by the fishery research ship, the number of impulses averaged 20 to 25 per second.

The scientists on board the "Walter Herwig" aimed at obtaining exact comparative data and thus the nets were thrown out and fetched in eight times using electrical current and eight times with the current switched off. It was very apparent afterwards that forty percent more fish had been caught with the electrical nets than without. Increases of from 50 to 70 percent were registered for certain types of fish such as cod and plaice.

The promising data collected on board the fishery research ship has also aroused great interest outside Germany's frontiers. It is possible that the variable reactions of the different sorts of fish to the electrical field in the towing nets can be utilised to fix the type of catch. Differing methods could be used to attract and hold fast the different kinds of fish.

The introduction of the electrical net to deep-sea fishing would also make possible a reduction in towing speed and increase the chances of smaller vessels with less powerful engines returning home with a good catch. Hitherto it has been necessary to step up speed to try and secure fleeing fish in the nets, but this problem can now be solved by means of electrical current. Moreover, smaller nets could also be utilised and this would signify considerable savings for the fisherman. Although all these possibilities have still to be tried out thoroughly, the experts are nevertheless referring to a new epoch in deep-sea fishing. ★

DIAMONDS FROM THE HIGH-PRESSURE PRESS

Within the space of two years, the mineralogist, Professor Neuhaus, and his colleagues have managed to catch up on the twenty-year lead of international research scientists in the field of synthetic diamonds. They collaborated closely with German high-pressure and high-temperature technicians. According to what the professor said at a press conference of the State Government of North Rhine-Westphalia, which financed his expensive experiments, he is in a position today to produce diamonds with absolute certainty under rigidly defined conditions of temperature and pressure. This means that the German scientists are the first to have turned the diamond synthesis into a process, about which complete clarity exists and over which complete control can be exercised. There is no doubt that this is the most decisive step in this research field since the first concrete results were achieved in the year 1954.

Research into the artificial production of diamonds, which had been going on for centuries, reached its first climax with the revolutionary work of the American, Bridgeman, in the year 1947. Bridgeman received the Nobel prize for his endeavours. In 1954, the American General Electric Company and the General Swedish Electricity Company submitted tangible results in the form of the first synthetic diamonds. Soon afterwards a large number of scientists mastered the diamond synthesis, but for the most part the outcome was based on sheer coincidence. None of the methods sufficed for producing diamonds of a worthwhile size. Even after a further eight years of research, the diamond synthesis remained a process, which was inadequately understood both technically and scientifically.

It was in the summer of the year 1962 that the wellknown mineralogist, Professor Neuhaus who is a professor of Bonn University and simultaneously director of the mineralogical-petrological institute there, began his research work with a small team of collaborators. It was thought that German research in this particular field was too far behind international science the estimate was about two decades for decisive progress to be made. It was thus regarded as sensational all over the world when as early as September 1964, the first successful syntheses were reported from Bonn and it was clear that the Germans had drawn level with the other scientists, who had mastered the procedures. A cylinder of pure graphite had been exposed to temperatures of 1,240° centigrade and pressures of sixty thousand atmospheres in a tiny high-pressure chamber. The result for the Bonn Scientists had been a crystal-clear, transparent, colourless diamond in the form of an exact cube.

During the past year, the German research group managed to develop its method of diamond synthesis to such an extent that it would now be possible to exploit the results of the experimentation in industrial production. According to Professor Neuhaus, if complete control is exercised over the outer form and temperatures of upto 1,600° Centigrade are utilised as well as pressures of upto 70,000 atmospheres, even larger diamonds could be produced. The price for synthetic diamonds still remains higher than that for the natural stones-but industrial production on a large scale is likely to change the situation in the very near future. The new method is expected by the experts to take on great significance, because the economy is urgently in need of inexpensive industrial diamonds. ★

ELECTRICAL PRESSURE TRANSDUCER

Electrical Pressure Transducer is a sensing device in which pressure is converted to proportional electric current or voltage. The main advantage of this sensor over mechanical gauges is that the output signal can be amplified, indicated and recorded or telemetered, with high accuracy and linearity. Such transducers and their associated amplifiers have been developed in National Aeronautical Laboratory, Bangalore for the measurement of static and dynamic pressure in wind tunnels and other aerodynamic facilities.

The pressure transducer is basically an electromechanical device. In one of the models, the fluid medium, whose pressure is to be measured, is made to deflect a thin stainless steel diaphragm held rigidly in a circular flange assembly. The sensing element is a Dinear Variable Differential Transformer (L. V. D. T.) comprising of a primary coil and two identical secondary coils wound on both sides of the primary. A soft iron cylindrical core coupled to the centre of the diaphragm, moving axially inside the coil assembly, constitutes the displacement sensor. When the primary of L. V. D. T. is excited with an alternating current signal, equal voltages are

induced in the two secondaries, if the iron core is symmetrically positioned with respect to the coils. This position is called the "NULL" position. The output of the secondary coils, connected in opposition, is zero at "NULL". When a pressure is applied to the diaphragm, the iron core is displaced from its NULL position, resulting in an unbalanced output voltage, which is a function of core displacement and hence a function of the applied pressure. The transducer fabricated in the Laboratory has a range of 0 to 30 p. s. i. g. and has an overall accuracy of 1 %.

The associated amplifier and detector unit is transistorised and designed to give a panel meter indication, or an analogue output voltage proportional to the pressure being measured by the transducer.

The instrument operates on 230 V/50/c/s/ A. C. mains and can be easily converted to operate on a nine volt dry cell.

The instrument can be well employed for measurements with other types of electrical transducers, using such sensors as bonded and unbonded strain gauges. ★

Grams: BATHTUB

Phone: 24474

Contact:

BAFNA & Co.,

P. B. No. 154
306, Thambu Chetty Street,
Madras-1

Distributors:

PARRY'S SANITARYWARES
"COMMANDER"
E. W. C. SEAT & COVER
R. K. C. P. & E. I. C.
FIRE-CLAY SINKS

For Everything in Coloured & White Sanitarywares Coloured and White GLAZED TILES and MARBLES.

Except for canning, initially developed for Napoleon's troops, atomic radiation is the first new way of preserving food since the age-old methods of drying, salting, smoking, fermentation, pickling, cold storage and freezing—all processes known to our early ancestors.

Unlike canned foods which have been cooked, irradiated fresh foods closely resemble the original items in tastes and appearance.

Research on food irradiation has been conducted since the 1950's by the U. S. Department of Defence and the U. S. Atomic Energy Commission (AEC) under mandate from the U. S. Congress to develop beneficial uses of atomic energy "to improve the general welfare and increase the standard of living."

In a recent study prepared for the AEC, U. S. officials of the Commerce Department predict that "irradiation will be recognised as a major technique for food preservation within the decade".

For the layman, the term "food irradiation" may conjure up a picture of nuclear beams scattering deadly rays in all directions. But in reality it is no more dangerous than food cooked outdoors. Technically, it involved exposing food to controlled doses of radiation but it does not make food radio-active. Grilling hamburger, something many housewives do frequently, is, in fact, preserving food by irradiation with the infrared rays emitted from the fire.

Radiation will not better the quality of any food, but it will maintain commodities in the best possible condition for a greater length of time. Since radiation will not improve food quality, technicians must irradiate products in their freshest state, especially fruits and fish. As a result, mobile radiation facilities have been moved near orchards at harvest time

and on board fishing vessels. It has been found that radiation treatment extends the life span of fresh foods from two weeks to as long as a year.

U. S. Department of Commerce officials say products for which radiation preservation is believed to hold the most promise for commercial development in the coming years are chicken, turkey, beef, pork, ham, fish, shellfish, dehydrated vegetables, and a variety of fresh fruits including strawberries and sweet cherries. These are all products which compare favourably in taste after irradiation. Of 28 different foods considered in the study, 17 were found to have "good" or "excellent" prospects.

The U.S. Food and Drug Administration which requires that a product be proved safe before it can be legally marketed, already has cleared radiation-treated bacon, potatoes, wheat and wheat products for human consumption. Next year, petitions will be submitted for approval of irradiated chicken, ham and pork as well as for several marine products. Requests for 1967 and 1968 will include crab, shrimp, halibut and beef as well as prunes, apricots and nectarines.

Preservation of food by radiation offers great promise in feeding the world's hungry and meeting future needs of a growing population. Authorities say this technique would be extremely valuable in countries with a food shortage or where there is a lack of transportation and distribution facilities.

The United States presented scientific papers on the treatment of food by nuclear radiation at the first International Conference on the Peaceful Uses of Atomic Energy in 1955. It has continued to disseminate new technical information to all interested agencies and individuals since then.

INDUSTRIAL CO-OPERATIVES AND THE SMALL SCALE HANDICRAFTS AND COTTAGE INDUSTRIES IN THE MADRAS STATE

By Sri D. Mariasusai

(Joint Director of Industries & Commerce and Registrar of Industrial Co-operatives)

The expression "Industrial Co-operatives" is of a recent origin and many do not know what it means. A common man will understand it as something to do with industry. For a man who is connected with a Co-operative Society in one way or the other it will mean a Co-operative Organisation engaged in an industry. An economist will feel that it is one of the methods of developing the industrial economy of the country, while a private industrialist might consider it as a losing venture attempted by the State, while a Government official who has had no knowledge in the administration of Co-operatives may wonder whether it could be worked economically or profitably. And a person, politician or otherwise - who believes in Democratic Socialism will swear by it. In short the general public are in the dark as to the responsibilities of the State in this regard and the wisdom of the State in promoting the Industrial Co-operatives. A proper appraisal of the origin, growth and development of Industrial Co-operatives, hence, seems necessary.

2. The importance of giving a distinctly Co-operative bias to cottage and Small Scale Industries was emphasised by the Government

of India in its 1948 Industry Policy Resolution. Further the Constitution of our country has laid it down as the responsibility of the State, that "it shall endeavour and promote Cottage Industries on Co-operative basis in rural areas." Again the 1956 Industry Policy Resolution stressed the Government's intention to develop a steadily increasing proportion of the activities of the Private Sector along Co-operative lines. The State has therefore been giving increasing importance to the development of village and Small Industries on Co-operative lines in the Second and successive Five Year Plans, as the result of which, the Co-operative content of the Industrial Sector has been making significant impact in the Industrial Economy of the country.

3. In the past, a Co-operative Society, which consisted of artisans undertaking manufacture of consumer goods was called a Cottage Industries Society and classified as a non-agricultural, non-credit, producers' Society. This type of society is now called an Industrial Co-operative Society, a new term coined for the purpose of implementing the Industrial Development Plans in the Co-operative Sector under the Second and

subsequent Five Year Plans. Therefore, the activities of an Industrial Co-operative should be based on Co-operative Ideology. An Industrial Co-operative Society engaged in Small Scale Village or Cottage Industry should, therefore, be constituted and run in accordance with the Co-operative principles, namely to promote the economic interests of its members, as human beings with equal rights, sharing the profits realised in the industrial production in proportion to the labour contributed to production or to its business by way of purchases or sales or services availed of or utilised, quite contrary to the normal practice obtaining in a Private Industrial concern where profits are distributed in proportion to the capital contributed by its partners or share-holders. In short in a Joint Stock Company, *the capital is mobilised, the labour is hired, and the profit is distributed according to capital contributed. While in an Industrial Co-operative, the labour is mobilised, the capital is hired and profit is distributed according to labour contributed.* In the case of Service Industrial Co-operatives for master workers, Entrepreneurs and Small Scale Industrialists the profits are distributed in proportion to the business transacted by each, or in other words, the purchases made or sales effected or services utilised or rendered by each.

4. The Industrial Policies of the country are implemented through specially constituted Boards for each industry, such as, the Small Scale Industries Board, the All India Handicrafts Board, the Coir Board, the Silk Board, the All India Handloom Board, and the All India Khadi and Village Industries Board now reconstituted as the Village Industries Commission. Each Board deals with its industry, but the Small Scale Industries Board also deals with other industries which are outside the purview of other Boards. Accordingly, the Industrial Co-operatives are

also classified as the Small Scale Industrial Co-operatives, the Handicrafts Co-operatives, the Coir Co-operatives, the Sericultural Co-operatives, the Handloom Co-operatives, and Village Industrial Co-operatives. There is yet another type of society which is called Cottage Industrial Co-operative which also comes under the purview of the Small Scale Industries Board.

In Madras, the State Khadi and Village Industries Board and the Director of Handlooms are in the administrative charge of Village Industrial Co-operatives and Handloom Weavers' Co-operatives respectively. In this article an attempt has been made to give an account of the growth and the development of all other Industrial Co-operatives, which are under the administrative charge of the Industries Department from 1956 when the term "Industrial Co-operatives" came in usage.

5. At the close of the Financial Year 1964-65, there were 411 Industrial Co-operatives (232 Small Scale, 43 Handicrafts, 35 Coir and 1 Sericulture Co-operatives). Among them, the Small Scale Industrial Co-operatives are the most successful ventures. They manufacture variety of products, such as, light Engineering goods, Bolts and Nuts, Agricultural Implements, Ancillary Parts, Metalwears, Handmade Matches, Footwear and Leather goods, Furniture and other wood works, Bricks and Tiles, Textile Bobbins, Synthetic Gems, Garments etc. These Small Scale Industrial Co-operatives are served by a State Society, by name the Madras State Small Scale Industrial Co-operative Society, which procures and distributes raw-materials. It is a controlled stockist for Iron and Steel eligible to keep stocks to the extent of 3,000 tons and approved dealer in coke and coal. Apart from this an Industrial Co-operative Metal Rolling Mill has been established at Tiruchy for the manufacture and supply of

Brass circles and Stripes required by non-ferrous metal Co-operatives for the manufacture of household utensils.

(a) The activities of handmade Match Co-operatives do require a mention. There are ten workers Match Factories or INDCO MATCHES and two Service Small Producers Match Societies or "SINDCO MATCHES". Their total production capacity will be in the order of 11,000 grosses per day providing employment to about 11,000 persons. The present daily production is about 6,000 grosses. It will be stepped up to 11,000 grosses shortly.

(b) The Handicrafts Co-operatives in the State are federated into a State Society by name the Madras State Handicrafts Co-operative Marketing Society which procures and distributes raw-materials and undertakes marketing of the handicrafts products of its members by running 12 emporia or sales depots one in Connaught Place, New Delhi, 4 in Madras City and 7 in the moffussil centres. The handicrafts products produced by the Co-operatives are specially noted for: (i) the Tanjore Art Plate, (ii) the Swamimalai Ocons, (iii) the Pattamadai Fine Mats, (iv) the Vilandrasamudram Colour Mats, (v) the Nagercoil, Vagaikulam and Nachiarcoil Bell Metalwares, (vi) the Manapad and Ramnad Palmleaf products, (vii) the Tanjore Musical Instruments, (viii) the Myladi and Modayur Stone Images, (ix) the Tiruturaipoondi Pith, (x) the Gopalamudram Sun-hump rugs, (xi) the Kosapet and Vandipalayam Clay Toys, (xii) the Karigiri Pottery, (xiii) the Tanjore Paper Machine Toys, (xiv) the Walajapet Cane Products, (xv) the Nagercoil Lace and Embroidery etc. Among the Handicrafts co-operatives 61 are engaged in mat production. They are grouped into northern and southern regions, served by two central societies for procurement and supply basic raw-materials namely Korai Grass.

(c) The Coir Co-operatives numbering 36 are of two categories. The first are those undertaking the retting of green husks conversion of fibre and manufacture of yarn. The second are those which buy fibre and manufacture ropes. The first category societies are federated into a central Marketing Society at Nagercoil for undertaking the sale of their yarn. The central society for the second category is at Salem and markets ropes in consuming centres in Maharashtra, Madhya Pradesh States.

(d) There is only one Sericultural Society at Thalavadi in the border of Mysore State, which undertook manufacture of silk by running domestic basins. As it was uneconomical, it now assists its members in the rearing cocoons and the manufacture of charka silk by advancing loans to them besides marketing the silk produced.

(e) The bold and the successful venture is in Tea Industry in the Nilgiris where small growers own about 20,000 acres mostly belonging to the Badaga Community, the natives of the hills. There are eight co-operative tea factories and one central society to provide them service facilities such as distribution of fertilisers, pesticides etc. Each factory serves 1,000 acres and its daily production is 1200 kg of "made tea" valued about Rs. 6,000. Its capital cost is roughly Rs. 9.00 lakhs, partly raised, by loans from the Tea Board and the State Government and partly as Share Capital, from the Small Growers. Two factories, one at Kundah and the other at Kotagiri are successfully working. Preliminaries for the construction of factory buildings, purchase and erection of machinery for the running of six tea factories are nearing completion. All of them are expected to be commissioned by June '65, when all the six factories also go into production, the annual value of production of "made tea" will be roughly Rs. 144 lakhs.

(f) Four Co-operative Industrial Estates have been established at Tuticorin, Vyasarpadi (Madras), Pollachi (Coimbatore) and Sivakasi (Ramnad). They are to construct 200 factory units at a total estimated cost of Rs. 189 lakhs of which 20% is contributed by small industrialists, who will own the units on hire purchase and the remaining 80% is raised as loans from State Government and Life Insurance Corporation.

(g) An Industrial Co-operative Bank—The Madras State Industrial Co-operative Bank Limited, has been established and working successfully. It has a paid up share capital of Rs. 25.45 lakhs of which Rs. 12.80 lakhs were contributed by Madras Government, who have also guaranteed the principal and interest of the amounts deposited in the Bank. So far loans amounting to Rs. 30.97 lakhs have been given to Industrial Co-operatives and Rs. 6.87 lakhs to Small Industrialists. It has been working at profits since its inception. Its net profit for the year ended with 31-3-'65 is Rs. 1.06 lakhs.

6. To summarise, it seems necessary to indicate how far were their performances in the last financial year ended with 31-3-65. It need hardly be said that the primary object of Industrial Co-operatives is to provide maximum employment at minimum cost promoting thereby the economic well-being of persons with limited means and it will be interesting to note that as large a number as 33,342 persons were provided employment during the year. The financial implication are as follows. The loans (mostly from Government) outstanding at the end of the year amounted to Rs. 148.16 lakhs. During the year 1964-65 the production amounted to Rs. 213.38 lakhs which works out to 1½ times the Government investment; the wages paid to the employees amounted to Rs. 28.19 lakhs

which is 19.02% or 1/5th of the Government investment; and the total Government investment and the number of persons employed being Rs. 148.16 lakhs and 33,342 persons respectively, the per capital cost of providing employment to a person works out as low as Rs. 438. The Government expenditure on the administration of these Industrial Co-operatives during the period amounted to Rs. 9.28 lakhs. Deducting the recoveries of the cost of staff from Industrial Co-operatives to the tune of Rs. 2.29 lakhs, the net expenditure to Government was Rs. 7.9 lakhs which work out at Rs. 23 per annum for each person employed and the percentage of overheads to production at 3.5%. It is remarkable that the net profit after deducting the losses incurred by some of them comes to Rs. 5.49 lakhs which gives a return of 7.5% on the paid up share capital of Rs. 77.08 lakhs.

7. In conclusion, I wish to indicate what would be the future for the Industrial Co-operatives in our country. Today America is the wealthiest nation in the world because its economy is based on industry turned to high productivity. For the growth of an underdeveloped country or a developing country like ours, the growth of industries should be at a rapid pace. In other words, our country which is now based on agricultural economy should grow to an industrial economy. There is no doubt it should and ought to be so in the coming future. The sky is the limit for the growth of the industry. When Co-operatives do play an important role in the present agricultural economy, the Industrial Co-operatives should develop, keeping pace with the growth of the industrial economy. Whether one may believe it or not they have a surer and firmer ground in our country which is wedded to democratic socialism.

Revised Indian Standard for Aluminium Casting Ingots

The Indian Standards Institution has published a second revision of IS: 202-1966. It covers the requirements for aluminium base alloy ingots and castings for aircraft purposes.

The standard was first issued in 1950 and then revised in 1960. In the latest revision, following further modifications have been made.

- (a) Chemical composition and mechanical properties of some of the alloys have been modified;
- (b) General requirements given in the standard have been deleted and reference made to IS: 1387-1959 General Requirements for the Supply of Metal and Metal Products;

(c) As a separate standard has been published for methods of testing and inspection, the clauses pertaining to these have also been deleted and reference made to IS: 2304-1962 Procedure for Inspection and Testing of Light Metals (Aluminium and magnesium) and their Alloy Ingots and Castings for Aircraft purposes; and

(d) An appendix has been added for information giving characteristics and uses of aluminium casting alloy ingots and castings covered in this standard.

The standard priced at Rs. 2.00 can be had from the offices of the Indian Standards Institution located at New Delhi, Bombay, Calcutta, Kanpur and Madras.

Manufacturers of worlds best known

MORGANITE VOLUME CONTROLS,
PYE CAR RADIOS,
NANAOLA TRANSISTOR RADIOS,
AMPLIFIERS ETC.

Contact:

M. R. Electronic Components Ltd.
SUPER - A, 1 & 2, INDUSTRIAL ESTATE, GUINDY, MADRAS-32.

I. S. I. CONVENTION AT ERNAKULAM THIS YEAR END

DISCUSSION ON STANDARDIZATION AND SMALL SCALE INDUSTRIES

The small scale sector of the Indian industry has a very important contribution to make to the economy of the nation not only for increased production of finished consumer goods and services but also for the development of ancillary and feeder industries. The gross output of this sector exceeds a third of the total industrial production in the country. It is essential, therefore, that its operations should be conducive to maximum possible cost economies and ensure that its products meet the requirements of quality demanded by agreed standards.

However, owing to the limited resources available to the small scale sector it is often claimed that small scale units do not find themselves in a position to engage technical personnel and provide elaborate facilities for testing and other quality control measures. These and other difficulties are supposed to come in the way of small scale units and deprive them of full benefits of standards and quality marking scheme, such as Indian Standard Institution certification Marks scheme, which could contribute a great deal to their competitive strength and pace of growth.

Realizing the important contribution that the small scale industries have to make to the

economy of the nation, "Standardization and Small Scale Industries" has been chosen as one of the subjects for discussion at the Tenth Indian Standards Convention scheduled to be held at Ernakulam from 26th to 31st December this year. A whole day session will consider the real problems encountered by the small scale industries in relation to standardization and certification marking and the steps that could be taken to resolve them particularly in so far as the small scale industries in the southern region of the country are concerned.

The convention would include, apart from technical sessions, a number of visits to industrial plants and places of historical and tourist interest, as also some cultural and social functions. If a sufficient number of delegates shows interest, excursions may also be organised to places like Cape Comerin and Periyar Wild Life Sanctuary at Thekkady at the expense of the delegates.

Standardization for Import Substitution, Metric changeover, company standardization and productivity, Standardization and Small Scale Industries, Training in Standardization Technology, Standards for the Home and Standard for Technical Editors and Publishers are the main topics scheduled for discussion in the technical sessions of the proposed convention.

BUILDING BRICK DECLARED AN ESSENTIAL ARTICLE

ORDER COMES INTO FORCE IN MADRAS CITY AND CHINGLEPUT DISTRICT

The Government of Madras has promulgated under the Essential Articles Control and Registering (Temporary Powers) Act, 1949 an order to control and regular the prices and supply of building bricks. This fresh order called the Madras Brick (Control of Price and Supply) order, 1966 has come into force in Madras City and Chingleput District with effect from July 1, 1966 and may be extended to the other districts in this State by notification of the Government. An earlier order to control the price and supply of bricks issued under the Defence of India Rules has now been cancelled.

The following are some of the provisions of this order published with the Industries, Labour and Housing Department Notification S. R. O. No. A. 615 of 1966 Part V of the Fort St. George Gazette-Extraordinary dated the 1st July, 1966.

CONTROL ON PRICE & SUPPLY OF BRICKS NEW GOVERNMENT ORDER

The Madras Government has promulgated under the Essential Articles Control and Requisitioning (Temporary) Powers Act a fresh order to control and regulate the prices and supply of bricks.

The Provisions of the order have come into force in Madras City and Chingleput district with effect from July 1 and may be extended to other districts by the Government by notification.

An earlier order to control the price and supply of bricks issued under the Defence of India Rules has been cancelled.

REGISTRATION OF MANUFACTURERS AND DEALERS IN BRICKS

Within the period specified in sub-clause (3) every manufacturer or dealer shall send to the Director of Industries and Commerce, Madras a statement in form 'A'. Every statement shall be accompanied by a treasury receipt showing that a fee of one rupee has been paid into the local treasury under the head of account "XXIX. Industries—a Industries—Fee for Registration as Dealers or Manufacturers in Bricks under the Madras Bricks (Control of Price and supply) Order, 1966."

On receipt of the statement, the Director of Industries and Commerce shall, on being satisfied about the correctness of the statement register the name and address of the manufacturer or dealer in the register maintained

for the purpose and shall issue in Form 'B' a registration certificate to the manufacturer or dealer. The registration certificate shall be prominently displayed at the usual place of business.

Permit for export:—No person shall export or attempt to export or abet in the export of bricks except under and in accordance with a permit in Form 'C' issued by the Director.

Sale of bricks to consumers at controlled prices :—(a) No person shall sell or attempt to sell or abet in the sale of bricks to any person other than a consumer or a registered dealer.

(b) No person shall sell or attempt to sell or abet in the sale of bricks to any person at a price in excess of the price specified in Schedule II.

Sale of bricks on permit: In cases where a person applied to the Director of Industries and Commerce for a permit to purchase bricks for use in construction, the Director may on being satisfied about the bonafides of the request, require any manufacturer or dealer holding stocks of bricks to sell the whole or a special part of such stocks on a permit issued by the Director in Form 'D' to such person and subject to such conditions as may be specified therein.

The application for a permit shall be made in Form 'I'.

Every application in Form 'I' shall be accompanied by a treasury receipt showing that a fee of one rupee has been paid into the local treasury under the head of account "XXIX. Industries—a. Industries—Fee for Grant of Permit for Bricks under the Madras Bricks (Control of Price and supply) order, 1966".

Contravention of direction prohibited:—No manufacturer or dealer shall act in contravention of any direction issued by the Director.

Maintenance of Registers:—Every manufacturer or dealer, shall maintain a register giving an account of receipts and sales of bricks in Form 'E' and shall keep the register up-to-date and strike the balance at the close of each day.

Submission of Returns:—Every manufacturer or dealer shall submit to the Director the following returns for every fortnight ending with the 15th day or as the case may be the last day of each month so as to reach the Director within five days at the close of such fortnight.

A return in form 'F' showing the manufacture, purchase and sale of bricks within the period and the balance at the end of the period; and

A return in Form 'G' showing all sales each of which exceeded 10,000 bricks effected during the aforesaid period.

FORM 'A'

(See Sub-clause (1) of clause 3)

STATEMENT TO BE SENT BY MANUFACTURER/DEALER FOR OBTAINING A REGISTRATION CERTIFICATE UNDER SUB-CLAUSE (1) OF CLAUSE 3 OF THE MADRAS BRICKS (CONTROL OF PRICE AND SUPPLY) ORDER, 1966.

1. Name and full address of the manufacturer/dealer... ..
2. Exact location of kiln/depot :
 - (i) Village, taluk/district
 - (ii) Main Road
 - (iii) Milestone nearest to kiln/depot site

Category of bricks manufactured.	Total capacity per annum.	Remarks.
(1)	(2)	(3)
(a) Stocks Bricks Table mould 9 inches by 4½ inches by 3 inches.		
First Sort		
Second Sort		
(b) Country Bricks 9 inches by 4½ inches by 2 inches.		

3. Total value of fixed assets, that is, land, buildings and machinery.
4. Number of workers employed.

Station:

Date:

Signature of the Manufacturer/Dealer.

With the best compliments of:

LAXMI INDUSTRIAL CORPORATION

Super B 6, Industrial Estate

::

Guindy, MADRAS-32.

Manufacturers of: BRASS RODS IN ANY SHAPE & PROFILE AND M. S. BRIGHT SHAFTINGS

We also undertake conversion of customers' materials.

Telegrams: BRASSLINE

Telephone: 80690

FORM 'B'

(See Sub-clause [2] of clause [3])

Registration Certificate No.

REGISTRATION CERTIFICATE UNDER SUB-CLAUSE (2) OF CLAUSE 3 OF
THE MADRAS BRICKS (CONTROL OF PRICE AND SUPPLY) ORDER, 1966.

This is to certify that the name and address of (name) (address)
manufacturer or a dealer in bricks have been registered in the Office of the Director of
Industries and Commerce, Madras, under the Madras Bricks (Control of Price and supply)
Order, 1966.

Station :

Date :

Signature of Director of
Industries & Commerce, Madras.

FORM 'C'

(See Clause 4)

PERMIT FOR EXPORT OF BRICKS ISSUED UNDER CLAUSE 4 OF THE
MADRAS BRICKS (CONTROL OF PRICE AND SUPPLY) ORDER, 1966.

(category) is permitted to export bricks

(a) Stock bricks—

First sort

Second sort

(b) Country bricks :

not exceeding

(destination)

This permit is valid till the

Station :

Date :

Signature of Director of
Industries and Commerce, Madras.

FORM 'E'

(See Clause 9)

BRICKS REGISTER TO BE MAINTAINED BY THE MANUFACTURER/
DEALER UNDER CLAUSE 9 OF THE MADRAS BRICKS (CONTROL
OF PRICE AND SUPPLY) ORDER, 1966.

1. Name and full address of the
manufacturer/dealer

2. Exact location of kiln/depot

(i) Village/taluk/district

(ii) Main Road

(iii) Milestone nearest to kiln/depot site

Date of the month	Category of bricks	Opening balance of bricks	Number of bricks received or manufac- tured	Total of columns (3) and (4)	Number of bricks sold	Closing balance	Remarks
----------------------	-----------------------	---------------------------------	---	------------------------------------	--------------------------	--------------------	---------

(a) Stock bricks :

First sort

Second sort

(b) Country bricks

Note : Column (3): This entry will be the closing balance of the previous day.

Station :

Date :

Signature of the Manufacturer/Dealer

JULY — SEPTEMBER 1966

47

FORM 'F'

(See sub-clause (i) of clause 10)

RETURN SHOWING THE MANUFACTURE, PURCHASE AND SALE OF BRICKS DURING THE FORTNIGHT TO BE SUBMITTED BY THE MANUFACTURER/DEALER UNDER SUB-CLAUSE (i) OF CLAUSE 10 OF THE MADRAS BRICKS (CONTROL OF PRICE AND SUPPLY) ORDER, 1966.

- 1. Name and full address of the manufacturer/dealer
- 2. Exact location of kiln/depot :
 - (i) Village/taluk/district
 - (ii) Main Road
 - (iii) Milestone nearest to kiln/depot site

Fortnight ending with the	Category of bricks	Opening balance (stock in hand on the commencement of the fortnight)	Number of bricks manufactured or purchased during the fortnight	Total of columns (3) and (4)	Sales during the fortnight	Closing balance on the last day of the fortnight	Remarks
---------------------------	--------------------	--	---	------------------------------	----------------------------	--	---------

- (a) Stock bricks
 - First sort
 - Second sort
- (b) Country bricks

Note: Column (3): This entry will be the closing balance of the previous fortnight.

Station:

Date:

Signature of the Manufacturer/Dealer.

FORM 'G'

(See sub-clause (ii) of clause 10)

RETURN SHOWING ALL SALES EACH OF WHICH EXCEEDED 10,000 BRICKS EFFECTED DURING THE FORTNIGHT TO BE SUBMITTED BY MANUFACTURER/DEALER UNDER SUB-CLAUSE (ii) OF CLAUSE 10 OF THE MADRAS BRICKS (CONTROL OF PRICE AND SUPPLY) ORDER, 1966.

- 1. Name and full address of the manufacturer/dealer
- 2. Exact location of kiln/depot
 - (i) Village/taluk/district
 - (ii) Main Road
 - (iii) Milestone nearest to kiln/depot site

Fortnight ending with the	Category of bricks sold	Name of consumer or dealer to whom more than 1,000 bricks sold and address	Total number of bricks sold
---------------------------	-------------------------	--	-----------------------------

- (a) Stock bricks
 - First sort
 - Second sort
- (b) Country bricks

Station:

Date:

Signature of the Manufacturer/Dealer

JULY — SEPTEMBER 1966

(See clause 12)

1. Name and full address of the manufacturer/dealer
2. Exact location of kiln/depot—
 - (i) Village/taluk/district
 - (ii) Main Road
 - (iii) Milestone nearest to kiln/depot site

Category of bricks manufactured	Stock on hand as on date	Remarks
------------------------------------	-----------------------------	---------

Station :

Date :

Signature of the Manufacturer/Dealer.

(See sub-clause (1) of clause 7)

APPLICATION FOR ISSUE OF PERMIT FOR BRICKS

(Name and full address of the applicant)

To

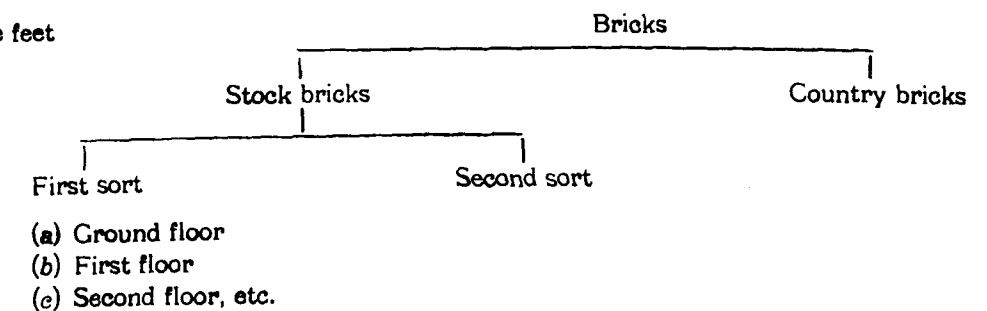
The Director of Industries & Commerce, Madras

1. (a) I/We intend to build/alter/repair the building, the particulars of which are given against item 3 below and request that the quantity of bricks specified in column (2) thereof may be allotted to me/us.

(b) The plan of the building proposed to be constructed/alttered/repai red is situated in Plot No. Block No. Road/Street has been sanctioned by Corporation of Madras/Village/Town Municipality/Panchayat Union-vide its Resolution/Approval/Order No. dated . Attested copies of the sanctioned plan and resolution/approval/order are enclosed.

2. Area of the proposed construction/alteration/repair and quantity of bricks required as specified below : —

Area
Square feet



3. A detailed estimate of the number of bricks required certified by a competent engineer is enclosed.

4. The original treasury receipt No. _____ dated _____ for payment of the prescribed fee is enclosed.

Signature of applicant.

SCHEDULE II

See sub-clause (b) of clause (5)

	Price per thousand bricks ex-kiln Rs. P.
1. Bricks, stock, first sort, table moulded (chamber burnt) 9 inches by 4½ inches by 3 inches	60.00
2. Bricks, stock, second sort, table moulded (chamber burnt) 9 inches by 4½ inches by 3 inches	50.00
3. Bricks, country, ground moulded (chamber burnt) 9 inches by 4½ inches by 2 inches	34.00
(a) Maximum transport charges permissible for 1,000 numbers of stock bricks inclusive of loading and unloading charges for a lead up to 5 miles	13.46
(b) Charges for transport for every additional mile or part thereof for 1,000 numbers of stock bricks	1.00
(c) Maximum transport charges permissible for 1,000 numbers of country bricks inclusive of loading and unloading charges for a lead up to 5 miles	8.75
(d) Charges for transport for every additional or part thereof for 1,000 numbers of country bricks	0.65

The price of bricks of all sizes other than those mentioned under each category should be categorised for sale.

The decision of the Director regarding the sort to which a particular stock of bricks calculated in ratio to the volume content of these bricks, to the rate fixed for the respective shall belong be final.

PHARMACEUTICALS

AMRUTANJAN

FOR ACHES & PAINS

Messrs. AMRUTANJAN LTD.

Nos. 14-15, Luz Church Road, MADRAS-4.

UNIFIL

SUPERB HEAT AND COLD INSULATION MEDIUM



OTHER MANUFACTURES

- ★ High grade Refractory Materials for power, iron & steel and other industries
- ★ Glass Tank Blocks and Pot Mixtures
- ★ Detric 'Detred' Tiles for industrial furnaces
- ★ Burnite Air-setting Refractory Cement
- ★ Acid-resisting Wares
- ★ Vitri-chlorinators
- ★ Light Calcined Magnesite Cement
- ★ Magnesite Assay Cupels
- ★ Graded Magnesite Chips for mosaic floors
- ★ Superior quality Salt-glazed Stoneware Pipes

ENQUIRIES TO

BURN & CO. LTD.

REFRACTORY & CERAMIC GROUP

WORKS:

West Bengal: Raniganj, Durgapur,
Andal Bihar: Gufarbari
M.P.: Jabalpur, Niwar
Madras: Salem

Managing Agents:

MARTIN BURN LIMITED
Martin Burn House, 12 Mission Row,
Calcutta 1

Branches:

New Delhi Bombay Kanpur Patna

Agents in South India:

THE SOUTH INDIAN EXPORT CO. LTD.
MADRAS 1

ACC-31

For Your Requirements of:

STANDARD . . .

- ✱ Condensers
- ✱ Volumetric Wares
- ✱ Inter-changeable Ground Glass Apparatus
- ✱ Graduated Wares
- ✱ High Vacuum Apparatus
- ✱ And all types of Scientific and Laboratory Glassware

and Special Glass Apparatus of your design
to serve your specific purpose if standard
items are not suitable.



Please contact:

The Superintendent,
GOVERNMENT SCIENTIFIC
GLASS TRAINING CENTRE,
GUINDY — MADRAS-32.



A Division of the
Department of Industries
and Commerce, Madras

INDUSTRIAL LICENCES

LIST OF LICENCES ISSUED UNDER THE INDUSTRIES (DEVELOPMENT AND REGULATION) ACT, 1951 DURING THE MONTHS OF JANUARY, FEBRUARY AND MARCH, 1966

FOR THE STATES OF MADRAS, ANDHRA PRADESH, KERALA, MYSORE AND PONDICHERRY ONLY

Name and full address of the undertaking (and location)	Articles of manufacture and capacity (type of licence i.e. NU/SE/NA/COB/Shifting)	Licence No. and date
Schd. Ind. No. 23 (1)—Cotton Textiles		
Kaleeswarar Mills Ltd., 10/8, Anupparpalayam Road, Coimbatore. (Kalayarkoil, Madras State)	Spindles for the manufacture of cotton yarn [S. E.] ... 9,000	L/23(1)/1045/66 11-1-66 Tex (H)
Sri Lakshminarayana Textiles Ltd., 'Lakshminar', Race Course, Coimbatore, (Madras State)	do do ... 12,680	L/23(1)/1046/66 11-1-66 Tex (H)
Parvathi Mills Ltd., Vadakumbhagom Word, Post Box No. 1, Quilon. (Quilon, Kerala)	do do ... 11,540	L/23(1)/1050/66 22-1-66 Tex (B)
Andhra Cotton Mills Ltd., Post Box No. 5, Prodattur P.O., (Andhra Pradesh)	do do ... 13,000	L/23(1)/1051/66 3-2-66 Tex (H)
Vijayamohini Mills Ltd., Thirumala, Trivandrum-6, (Kerala)	do do ... 9,920	L/23(1)/1054/66 11-3-66 Tex (H)
Schd. Ind. No. 25—Sugar		
The Andhra Sugars Ltd., Venkatarayapuram, Tanuku, West Godavary District, (Tanuku, West Godavary District, (Andhra Pradesh)	Increased crushing capacity by of sugar cane per day [S. E.] ... 1,250 tonnes	L/25/N—181/66 20-1-66

(Continued)

(Continued)

Name and full address of the undertaking (and location)	Articles of manufacture and capacity (type of licence i.e. NU/SE/NA/COB/shifting)	Licence No. and date
Amaravathy Co-operative Sugar Mills Ltd., Post Box No. 1, Madathukulam Post, Coimbatore District, (Madras State)	do do ... 350	L/25/N-187/66 9-2-66
Schd. Ind. No. 8 (B-2)—Conveying Equipment		
Best and Company Private Ltd., Madras (Tondiarpet, Madras State)	Passenger and goods lifts [S. E.] ... nos. p. a. 100	L/8(B-2)/75/66—MEI 3-2-66
Schd. Ind. No. 5 (8)—Electronic Equipment		
Bharat Electronics Ltd., Bangalore, Bangalore (Mysore State)	Wireless, radar and electronic and Allied Apparatus [S. E.] ... Rs. 15 crores p. a. after expansion	L/5(8)/20/1EEI/66 19 2-66
Schd. Ind. No. 3—Boilers and Steam Generating,		
Bharat Heavy Electricals Ltd., 5, Parliament Street, New Delhi, (Thiruvanniyur, Tiruchirappalli District, Madras State)	Plants annual capacity M. W. generating capacity 1. High pressure boilers for thermal power station ... 753 tons 2. Valves and fittings ... 2,500 3. Pressure vessels ... 1,100 nos. 4. Package boiler ... 10 [N. U.]	L/3-6/EEI/66 21-1-66
Schd. Ind. No. 8 (A-1)—Textile Machinery		
Textool Company Ltd., Ganapathi Post Office, Coimbatore-6. (Coimbatore, Madras State)	annual capacity a. substantial expansion units Ring frames ... 300 b. New Articles baling press ... 100 [S. E. & N. A.]	L/8/A(1)/71/66—MEI 9-3-66
Schd. Ind. No. 19 (1)—Inorganic Heavy Chemicals		
Andhra Sugars Ltd., Venkatarayapuram, West Godavary District, (Tanuku, Andhra Pradesh)	Alum ... [N. A.] ... tonnes p. a. 3,000	L/19(1)/128/NA/ LI (III)/66 4-3-66

(Continued)

(Continued)

Name and full address of the undertaking (and location)	Articles of manufacture and capacity (type of licence i.e. NU/SE/NA/COB/shifting)	Licence No. and Date
Schd. Ind. No. 19 (4)—Synthetic Resins and Plastics		
Western India Plywood Ltd., Balisspatam P.O., Cannanore District, (Kerala)	Synthetic resins glue [S. E.] ... tonnes p. a. after expansion ... 324	L/19(4)/2/66—LI (I) 5-2-66
Schd. Ind. No. 27 (5)—Other Processed foods		
Sri G. S. Naidu, 11, Broadway, Madras-1. (Madras, Madras State)	Cocoa powder ... 375 Chocolate ... 125 [N. U.]	annual capacity tonnes L/27(5)/1/66—LI (I) 21-3-66
Schd. Ind. No. 34 (4)—China Ware and Pottery		
The Kerala Ceramics Ltd., Kundara P.O., Kerala State, Kundara, Kerala)	Stoneware pipes ... [S. E.] ... tonnes p. a. after expansion ... 12,000	P/34(4)/107/66— L. Ind. II 11-3-66

RUBBER PRODUCTS & MOULDING COMPANY

ENGINEERS IN RUBBER

Post Box 11202

CALCUTTA - 14

MAKERS OF INDUSTRIAL PRODUCTS IN
RUBBER, SYNTHETIC RUBBER AND EBONITE

WHEELS FOR TRUCKS AND TROLLIES, WASHERS,
LINING OF PIPES AND VESSELS, MOULDINGS
FOR CHEMICAL INDUSTRY, VALVES, BUCKETS,
DIAPHRAGMS, PRINTERS' ROLLERS, TEXTILE
ROLLERS, RLY. FITTINGS AND P.V.C. MOULDINGS.

STATEMENT SHOWING THE LETTERS OF INDENT ISSUED DURING THE MONTHS OF JANUARY, FEBRUARY AND MARCH, 1966 TO PARTIES WHO HAVE APPLIED FOR LICENCES UNDER THE INDUSTRIES (DEVELOPMENT AND REGULATION) ACT, 1951

Name and address of the undertaking (and location)	Articles of manufacture and capacity	Letter of Indent No. and date
Schd. Ind. No. 12—Miscellaneous Mechanical and Engineering Industries		
M/s. Widia (India) Ltd., 2/2-A, Kasturiba Road, Bangalore (Bangalore, Mysore)	Hard metal tools including brazed trpped tools, drawing dies, mining tools etc. ... 3,60,000 [N. A.]	nos. p. a. 5-46/65—MEI 4-1-66
Schd. Ind. No. 27—Food Processing Industries		
Shri G. S. Naidu, 11, Broadway, Madras-1, (Madras, Madras State)	1. Cocoa powder ... 375 2. Chocolate ... 125 [N. U.]	tonnes p. a. 2(3)/65—II (I) 17-1-66
Schd. Ind. No. 24—Paper and Pulp Including Paper Products		
M/s. Seshasayee Paper and Board Ltd., Pallipalayam P. O., Salem District, (Madras State)	Pulp and board ... 8,600 S. E.	LI (III)—17/150/65 29-1-66
Schd. Ind. No. 11—Earth Moving Machinery		
M/s. Cissy Private Ltd., D-131, Defence Colony, New Delhi, (Madras State)	Capacity to be determined 1. 5 T. P. H. Asphalt plant 2. Other asphalt plants, plant components and accessories 3. Asphalt finishers 4. Crushers and other processing equipment 5. Trenchers 6. Repair parts for above [N. U.]	IEI (A)—17/56/65 3-2-66

(Continued)

(Continued)

Name and address of the undertaking (and location)	Articles of manufacture and capacity	Letter of Indent and date
Schd. Ind. No. 19—Chemicals (Other than Fertilisers)		
M/s. Travancore Chemical and Manufacturing Co., Ltd., Post Box No. 19, Alwaye, (Alwaye, Kerala)	Zinc sulphate ... 90 [N. A.]	tons p. a. 32 (14)/65—LI (I) 11-2-66
Shri S. Nallaperumal, C/o. M/s. South Madras Oxygen & Acetylene (P) Ltd., 6, Saradambal Street, T. Nagar, Madras-17, (Madras State)	1. Oxygen ... 15 J M ³ 2. Dissolved acetylene gases ... 30 M ³ [N. U.]	hour 28(14)/65—LI (I) 16-3-66
Schd. Ind. No. 35—Cement and Gypsum Products		
M/s. Lloyd Insulators (Madras), 10, Victoria Crescent, Madras-8, (Madras State)	1. Asbestos moulded thermal insulation articles such as blocks, pipe sections, special compositions ... 800 2. Asbestos yarn, packings, cloth, textiles, tapes, proofed products woven buildings and hard and soft packings [N. U.]	tons p. a. IEI(B)—33/3/65 16-2-66
M/s. Madras Cements Ltd., Ramamandiram, Rajapalayam, Ramnad District, (Tulukkapatti, Ramanathapuram District, Madras State)	Portland cement ... 2,00,000 [N. U.]	tonnes p. a. 1-72/65—Cem. I 25-2-66
M/s. Cement Corporation of India Ltd., 184, Jor Bagh, New Delhi-3, (Sodam, Gulbarga District, Mysore State)	do do ... 2,00,000	1-78/65—Cem I 25-2-66
M/s. The Andhra Cement Co. Ltd., 'Ramakrishna Building', 38, Mount Road, Madras-6, (Nadikudi, Guntur District, Andhra Pradesh)	do do ... 5,00,000	1-85/65—Cem I 25-2-66
Schd. Ind. No. 32—Glue and Gelatine		
M/s. Mysore Chipboards Ltd., 2909, Temple Road, Vani Vilas Mohalla, Mysore-2. (Mysore)	Urea formaldehyde glue [N. A.]	tonnes p. a. 6(10)/65—LI (I) 23-2-66

(Continued)

(Continued)

Name and address of the undertaking (and location)	Articles of manufacture and capacity	Letters of Indent No. and Date
Schd. Ind. No. 1 A—Metallurgical Industries: Ferrous		
Shri G. N. Rao, United Bank of India Building, Second Floor, Sir P. M. Road, Fort, Bombay-1. (Hyderabad, Andhra Pradesh)	Malleable iron castings [N. U.]	tons p a. ... 3,000 No. EEI—6(5a)/65 3-3-66
Schd. Ind. No. 5—Electrical Equipment		
M/s. United Electrical Industries Ltd., Post Box No. 87, Quilon (Kerala)	Motor control gear such as flame proof starters, push button starters etc. (capacity to be determined) [N. A.]	No. EEI—13(14)/65 26-2-66
Schd. Ind. No. 25—Sugar		
The Chief Promoter, Shri Mahadeswara Sakkara Sakkare Kharkana Ltd., Kollegal Mysore (Kollegal, Mysore Dist, Mysore State)	Sugar [N. U.]	tonnes per diem ... 1,250 25 (701)/LC/64 26-3-66
The Chief Promoter, Shri Mallaprabha Co-operative Sugar Factory Ltd., C/o. The Belgaum D.C.C. Bank Ltd., Belgaum (Mugutkhan, Hubhi, Belgaum District Mysore State)	do do	... 1,250 25 (448)/IA (III)/60 26-3-66
The Chief Promoter, Vani Vilasa, Co-operative Sugar Factory Ltd., Hiriyar, Chitradurga District, (Hiriyar, Chitradurga District, Mysore State)	do do	... 1,250 25 (549)/IA (III)/61 26-3-66

WE SUPPLY EVERYTHING IN ALUMINIUM
JEEWANLAL (1929) LIMITED

Largest Manufacturers of "CROWN" & "SUN" Brands
ALUMINIUM, BRASS AND STAINLESS STEELWARES AND SUPPLIERS OF ALUMINIUM IN ALL FORMS.
CALCUTTA — MADRAS — BOMBAY — RAJAHMUNDY — DELHI — ADEN

**STATEMENT SHOWING THE CHANGES EFFECTED IN THE NAMES OF OWNERS /
UNDERTAKINGS DURING THE MONTHS OF JANUARY, FEBRUARY AND
MARCH, 1966**

Licence No. and date	Name of the original owner/ undertaking	Name of the new owner/undertaking
L/23(1)/420/Tex (B)/62 20-8-62 (N. U.) (Mysore)	M/s. Cotton Silk & Rayon Co-operative Society Ltd., Doddballapur.	M/s. The Doddballapur Spinning Mills Ltd., Doddballapur
Registration Certificate R-1/1/R/7(1)/1—31-5-64 (Mysore) L/1/1/56 L/7(1)/1 18-8-65 (S. E.) (Mysore)	No. M/s. Hindustan Aircraft Lt I., Bangalore.	M/s. Hindustan Aeronautics Ltd., Bangalore
L/36(2)/22—Chem IV/61 9-3-61 (N. U.) (Kerala)	Licensee: Shri M. N. Ramakrishnan	Owner: M/s. Forest Industries (Travancore) Ltd., Alwaye.
L/11(1)/64—AEI 18-1-64 (N. U.) (Madras State)	M/s. Trac Industries and Components Private Ltd., Madras.	M/s. Trac Industries & Components Ltd., Madras.

Tel: 'Srikrishna'

Phone: 2202

S. K. INDUSTRIES

70, T. P. K. Road, MADURAI - XI

Manufacturers: Teak Wood Casing, Capping Fillets, T. W. Boxes etc., 11 mm
Conduit Pipes & Fittings, Huller Spare Parts, Machinery Parts.

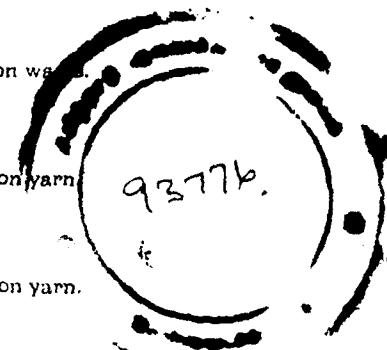
**STATEMENT SHOWING THE LICENCES REVOKED/SURRENDERED DURING
THE MONTHS OF JANUARY, FEBRUARY AND MARCH, 1966**

Licence No. and date	Name of the party	Articles of manufacture
L/24(1)/33/63—Ch. (I) 28-12-63 (N. U.) (Kerala)	M/s. Adhilakshmi Boards Ltd., Coimbatore.	Paper and Pulp.
L/23(1)/476/62/Tex. (B) 21-11-62 (S. E.) (Madras State) (Surrendered)	M/s. Premier Mills (CBE) Ltd., Udumalpet.	Cotton cloth.
L/23(1)/607/63—Tex (B) 10-10-63 (N. U.) (Madras State) (Surrendered)	M/s. Vasanthalakshmi Textiles, Madurai.	Cotton waste yarn.
L/19(1)/1—86/53 20-11-59 (S. E.) (Mysore)	M/s. Mysore Chemical manufacturers Ltd., Bangalore.	Sulphuric Acid.
L/23(1)/737/64—Tex (B) 9-2-64 (S. E.) (Mysore)	M/s. Bellary Spinning and weaving Co., Ltd., Bellary.	Cotton yarn.
L/23(1)/703/64—Tex (B) 24-2-64 (S. E.) (Andhra Pradesh)	M/s. Sree Akkamamba Textiles Ltd., Tanuku.	Cotton cloth.
L/23(1)/426/62—Tex (B) 24-8-62 (S. E.) (Madras State) (Surrendered) L/23(1)/683/64—Tex (B) 24-1-64 (S. E.) (Madras State) (Surrendered)	M/s. Lakshmi Mills Co. Ltd., Coimbatore.	Cotton cloth.
L/1A(3)/84/63—EI (M) 4-3-63 (N. A.) (Madras State)	M/s. Microtec Castings (P) Ltd., Madras.	Steel shots and grits.

(Continued)

(Continued)

Licence No. and Date	Name of the party	Articles of manufacture
L/23(1)/705/64—Tex (B) 24-2-64 (S. E.) (Andhra Pradesh)	M/s. Sarvaraya Textiles Ltd., Kakinada	Cotton cloth.
L/28(1)/15/62—Ch. II 17-8-62 (N. U.) (Madras State)	M/s. The Rajaratna Industries Private Ltd., Pappampatty P.O., Palni, Madurai District.	Rice Bran oil.
L/23(1)/699—64 Tex B 22-2-64 (S. E.) (Tanuku— Andhra Pradesh) (Surrendered)	M/s. Satyanarayana Spinning Mills Private Ltd., Tanuku.	Cotton cloth.
L/23(1)/782/64—Tex (B) 21-1-64 (S. E.) (Andhra Pradesh)	M/s. Hemalatha Textiles Ltd., Madras.	Cotton yarn.
L/23(1)/87/61—Tex (B) 7-4-61 (N. U.) (Madras State) (Surrendered)	M/s. Sri Angayarkanni Mills Private Ltd., Madurai.	Cotton waste.
L/23(1)/120/61—Tex (B) 23-5-61 (S. E.) (Andhra Pradesh)	M/s. Sree Ramachandra Spinning Mills (Regd.), Pandalapaka. (East Godavary District)	Cotton yarn.
L/23(1)/349/62—Tex (B) 22-8-62 (N. U.) (Andhra Pradesh) (Surrendered)	Shri A. Nageswara Rao, Hyderabad.	Cotton yarn.
L/7(5)/46/61—AEI 10-2-61 (N. U.) (Kerala)	M/s. Marikar Industries Ltd., Trivandrum.	Automobile leaf springs including centre bolts, 'U' Bolts and shackles for springs.
L/23(1)/707/Tex (B)/64 24-2-64 (S. E.) (Mysore) (Surrendered)	M/s. Gokak Mills Ltd., Gokak Falls, Belgaum District.	Cotton yarn.



ON GOVERNMENT LIST

THE GENERAL TRADING & AGENCIES

Dealers in

CARPENTRY TOOLS, BLACKSMITHY TOOLS, GARAGE AND OTHER WORKSHOP TOOLS,
ELECTROPLATING AND POLISHING MATERIALS, ETC.

First Floor

35-37, THAMBU CHETTY STREET, MADRAS-1

Phone: 21116

JULY—SEPTEMBER 1966

EDITED AND PUBLISHED BY THE DIRECTOR OF INDUSTRIES AND COMMERCE, GOVERNMENT OF MADRAS
AND PRINTED AT THE PRESS BRANCH, MADRAS STATE SMALL INDUSTRIES CORPORATION LTD.
INDUSTRIAL ESTATE, GUINDY, MADRAS-32.

M.S.S.I.C. - P.B. - J. 378 - C 700 / 28-9-66

**PRODUCTS OF SMALL SCALE INDUSTRIES,
HANDICRAFTS AND VILLAGE INDUSTRIES**

Manufactured at
**THE GOVERNMENT AND
CO - OPERATIVE UNITS
UNDER INDUSTRIES
DEPARTMENT**



are available for sale at
**INDUSTRIES DEPARTMENT
SALES EMPORIUM**
166-A, MOUNT ROAD, MADRAS-2